

NEGATION IN EARLY ENGLISH:
PARAMETRIC VARIATION AND
GRAMMATICAL COMPETITION

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Abstract

This large scale study of negation in English of the period 800-1500AD synthesizes three areas of linguistics: Minimalist syntactic theory, quantitative methodology, and textual study of data from two new large syntactically parsed corpora of Old English (Taylor 2002) and Middle English (Kroch & Taylor 2000). I integrate recent formal models of Minimalist syntactic representation (Chomsky 1995, 2000) with recent quantitative methods and models of change (Kroch 1989) to provide an economical and empirically defensible Minimalist analysis of changes in early English negation observed in progress across a large early English corpus. Quantitative data from morphosyntactic change in progress crucially establish the most appropriate syntactic analysis of early English negation and underpin a new model of grammaticalisation.

I present empirical evidence to distinguish three patterns of early English negation which are ordered in time to constitute Jespersen's Cycle (Jespersen 1917). These three stages are distinguished within a Minimalist syntactic framework (Chomsky 1995; 2000) using different morphosyntactic features. This approach accommodates the observed distribution of sentential negators in all early English clause types, unlike the accounts proposed by Frisch (1997) or van Kemenade (2000). I claim that grammaticalisation involves change in formal morphosyntactic features. My proposals distinguish two types of polarity head. One has LF interpretable NEG-features. The other does not have any LF interpretation. The Neg-criterion (Haegeman 1995) is reduced to a morphosyntactic feature checking dependency only applicable when the negative head does not bear LF interpretable NEG-features.

Quantitative evidence establishes the relationships between change in the position of negation in clause structure, change to the form of sentential negation, and change to the availability of multiple negation. A Minimalist approach to parametric variation provides a new perspective on the relationships between these early English changes, challenging previous accounts which link changes in the position of negation to Jespersen's Cycle (van Kemenade 2000) and which link changes in the availability of multiple negation to Jespersen's Cycle (Rowlett 1998).

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Declarations

Parts of the present research have been previously presented or published:

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This thesis has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree other than Doctor of Philosophy of the University of York. This thesis is the result of my own investigations, except where otherwise stated. Other sources are acknowledged by explicit references.

I hereby give consent for my thesis, if accepted, to be made available for photocopying and for inter-library loan, and for the title and summary to be made available to outside organisations.

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List of Abbreviations:

ACC	Accusative Case (in glosses)
CONJ	Conjunction
DAT	Dative Case (in glosses)
EME	Early Middle English (c.1150-1350)
EMnE	Early Modern English (c.1500-1700)
GEN	Genitive Case (in glosses)
HMC	Head Movement Constraint
LI	Lexical Item
LF	Logical Form
LME	Late Middle English (c.1350-1500)
ME	Middle English (c.1150-1500)
MHG	Middle High German
NEG	Sentential negation (in glosses)
NegV1	a negated finite verb in clause initial position
<i>ne+Vf</i>	The negator <i>ne</i> proclitic on the finite verb
NOM	Nominative case (in glosses)
NPI	Negative Polarity item (for example English <i>any</i>)
OE	Old English (c.800-1150)
Op	Operator
PDE	Present Day English
PF	Phonological form
PLD	Primary Linguistic Data
PPCME2	Penn-Helsinki Parsed Corpus of Middle English (2nd edition)
prn	Pronoun
Q	Quantifier
QR	Quantifier Raising
SBJ	Subjunctive mood (in glosses)
su	Subject
YCOE	York-Toronto-Helsinki Parsed Corpus of Old English Prose
Vf	Finite verb
X ⁰	A syntactic head
XP	A maximal projection

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Chapter 1

Issues and Approaches

1.1 Introduction

This thesis discusses the syntactic representation of negation in the early English period 800-1500AD. It encompasses both Old English (800-1150) and Middle English (1150-1500), aiming to establish the syntactic representation at various periods of English and aiming to provide insights into the changes which link these diachronic stages. The Old and Middle English periods witness far-reaching changes in the way negation is marked or expressed. My aims will be both empirical and theoretical. The thesis provides a longer perspective on changes to negation than previous studies. This will enable me to say with a greater degree of certainty exactly what forms negation takes in Old and Middle English and provide a more comprehensive picture of changes in the early English period. The work is based on detailed textual analysis of data from two large syntactically parsed electronic corpora of Old English and Middle English prose, and one smaller syntactically parsed corpus of Old English poetry (the York-Helsinki Parsed Corpus of Old English Poetry (Pintzuk and Plug 2001)). The Old English prose corpus is the York-Toronto-Helsinki Parsed Corpus of Old English Prose (YCOE) (Taylor et al. 2003). The Middle English prose corpus is the second edition of the Penn-Helsinki Parsed Corpus of Middle English (PPCME2) (Kroch and Taylor 2000a). Both prose corpora consist of 1.5 million words of syntactically tagged and parsed English from the written historical record. These are much larger resources than those available to previous studies of negation, and facilitate a more detailed syntactic account of negation in early English.

The most important empirical contribution this thesis will make is to examine

changes to the early English syntax of negation as a whole within a fairly long time period of seven centuries (800-1500AD). This is a sufficiently long timespan to track several changes from inception to completion. Here, I establish the range of grammatical options at various diachronic stages. The work proposes a representation of negation in early English within a syntactic framework of Principles and Parameters, using the limited range of formal devices and proposals put forward in recent Minimalist work. So my aim is to provide an empirically adequate syntactic account, which takes account of variation and change but is constrained by Minimalist notions of parameter. My aims and methods will be familiar from cross-linguistic or typological studies of parametric variation, the difference being that here the dialects under investigation do not bear a spatial relation to each other, but rather a temporal one.

I adopt recent proposals which treat change as grammar competition (Kroch 1989; 1994). These allow change to be modelled over time in ways which inform the nature of the syntactic options in competition. Using a grammatical competition model of change, I will show that the statistical patterning of changing usage over time allows us to make much more informed analyses of the syntactic options which constitute each parameter in a change scenario. Usage frequencies provide statistical evidence of the changing distribution of grammatical options over time. The relationships which hold between grammatical options in variation during the course of change provide a new perspective on parametric change. Quantifying the use of various structural options is just as important to the analysis as the more conventional qualitative approaches which identify the range of options in parametric variation. Using quantitative data to model change provides a basis to make distinctions between different ways of structuring syntactic parameters and hence between different syntactic accounts, in a way which synchronic studies do not. I seek to establish the range of surface changes which are attributable to particular parameters, and thereby delimit the number of parameters required to account for the observed variation. The structure of each syntactic parameter is informed by the relationship between grammatical options in actual use.

1.1.1 Minimalist approaches to syntactic variation and change

Throughout the thesis, I will strive for an analysis of early English negation which is Minimalist in the sense of Chomsky (1995; 1999; 2000). I will follow the version

of Minimalism set out in Chomsky (1999; 2000) for the most part, to see how this framework deals with diachronic data and parametric change. The framework uses morphosyntactic features to drive syntactic operations. Syntactic configurations are the result of feature-driven operations. The intuition which the Minimalist framework formalises is that the syntactic derivation is an optimal response to conditions outside the syntax, at the point where the syntactic structure interfaces with other modules of the brain: the Articulatory-Perceptual interface, which gives the syntactic structure morphological and phonological realisation, and the Conceptual-Intensional interface which gives the structure its logical interpretation. The output of the syntactic derivation must be legible at both interfaces. This implies that the syntax is a perfect and invariant system, which is empirically falsified by the range of parametric variation seen across languages. Given that features drive all syntactic operations, syntactic variation must be seen in terms of the distribution of morphosyntactic features.

Chomsky (1995; 2000) claims that movement is a consequence of features which are defective at the LF interface. These are features which the LF interface cannot interpret, hence the computation must work to eliminate such features before the interface is reached. Any LF uninterpretable features which remain at the interface cause the derivation to crash: the derivation cannot be interpreted as meaningful as it contains features which are uninterpretable at LF. In later work, Chomsky (1999) refines the notion of uninterpretable features, claiming that features consist of [F:value] pairs. Features which are unvalued as they enter the derivation must be valued during the derivation, by entering into a syntactic relation by matching with [F:value] pair of the same feature type. By entering into this relation, the unvalued feature is associated with an appropriate value. Features without a value are not well-formed objects which the LF interface can interpret. In order for the derivation to receive an interpretation at LF all unvalued ([F:]) features must be valued. The role of unvalued features is to establish syntactic relations between elements. Unvalued features appear at first to be an imperfection in the system, but they do useful work, establishing information structure and scope relations through displacement of elements to higher positions.

The difference between valued and unvalued features is the only distinction between features which has syntactic effects. Chomsky allows the morphological realisations of morphosyntactic features to vary freely, but this variation is post-syntactic, located in the morphological component at the PF interface. There are

three axes of variation in this model. First, variation in the heads with which particular morphosyntactic features are associated. Second, the morphological realisation of morphosyntactic features. Third, the difference between valued and unvalued features on a particular head. This constitutes a severe restriction on the range of variation available in earlier Principles and Parameters approaches, and leaves us with a highly constrained view of parametric variation, which locates variation outside the syntax, either in the feature composition of items selected from the lexicon, or in the post-syntactic morphological realisation of these elements.

There are three syntactic operations in the system all of which value unvalued features: Merge which builds syntactic structure out of lexical items; Agree, which establishes syntactic relations between unvalued and valued features; and Re-Merge, which re-Merges the element targeted by Agree at the root. This happens whenever an [EPP] feature is found, and results in a local spec-head relation between the Agreeing elements. This exhausts the features and operations in Chomsky's system. Syntactic configurations are demoted in significance in comparison to previous Government-Binding approaches. In Minimalist bare-phrase structure theory, which I will adopt, there is no requirement for each head to have a single specifier, as in X' -theory.

1.1.2 Assumptions concerning diachronic change

In order to make sense of the variation in Old and Middle English negation strategies, I will make extensive use of quantitative methodology. This allows me to distinguish stable variation from processes of change and examine the interaction of grammatical options over time. This is important to a full understanding of the constitution of a syntactic parameter. We can establish the relationship of options to each other over time. I will argue that grammatical options in direct variation or competition with each other should be regarded as different settings of a single parameter. In order to pursue this approach, I adopt a parameter resetting model of language change, together with the grammar competition model, and the techniques associated with it for modelling change over time.

I assume, following Lightfoot (1979; 1999) that syntactic change occurs through parameter resetting during language acquisition. Each generation of language learners constructs a new grammar, setting parameters on the basis of the data available to them in their linguistic environment (the Primary Linguistic data or

PLD). The problem is that the PLD does not provide the language learner with direct access to the parameter settings of others in the speech community. The PLD is a set of utterances, which are affected by morphological and phonological processes external to the syntax. Therefore, phonological and morphological change affects the PLD available to the language learner and may cause the language learner to fix his or her parameters in a different way to others in the speech community. The frequency of particular types of construction in the PLD may also affect an individual's parameter settings. Lightfoot argues that certain constructions are more salient cues for parameter setting than others. The most salient constructions are typically the most frequent. Therefore, changes in the frequency of particular grammatical options will have an effect on parameter resetting. Some data are more salient than others because they are unambiguous triggers of a particular parameter setting. Language learners set parameters on the basis of unambiguous PLD. Loss of these data may cause variation or change in the way parameters are set. Change in the way parameters are reset involves reanalysis of linguistic data by the language learner. PLD which once instantiated an old parameter comes to be reanalysed as the instantiation of a new parameter setting.

Minimalist syntax does not allow for ambiguous representations of linguistic data. Each string must map onto a single syntactic representation, so that each string is uniquely syntactically determined. Parameter resetting is typically taken to be abrupt, at least for the individual language learner. This account cannot handle the range of variation we find within individual texts of single authorship. This kind of variation indicates that there is competition between old and new parameter settings even at the level of the individual language learner. This is more in line with sociolinguistic studies, which show that individuals deploy a range of variation chosen from their linguistic repertoire according to the circumstances in which they are linguistic participants, for example the formality of the situation or the desire to project a particular image of solidarity or affiliation. Within a Minimalist account, each example of a particular string must be uniquely mapped onto a single syntactic representation, but that does not mean that there is only one analysis available to the language learner. Two or more structural representations may exist in competition, where they can be reduced to conflicting parameter settings. Kroch (1989) proposes that language users exhibit diglossia between multiple dialects with contradictory parameter settings. Henry (2002) argues that this situation leads to unconstrained levels of multid-

alectalism given that each parameter setting may involve its own grammar. I will show during the course of this thesis that a Minimalist approach to parameters constrains the possible range of variation and does not require language learners to be multi-dialectal in the sense of Kroch (1989). Pintzuk et al. (2000, 12) propose that Minimalism allows incompatible options within a grammar to be in competition, rather than entire grammars.

More needs to be said about the definition of parameters in the Minimalist framework. Quantitative methods show the way in which innovative parameter settings are diffused throughout linguistic contexts. The diffusion of a new parameter setting is distinct from the reanalysis which leads to the new setting in the first place. The former is a matter of language use, the latter a matter of syntactic reanalysis. The factors which promote competition rather than variation must lie outside the syntax or the process of parameter resetting itself. These may be to do with parsing, communicative felicity or the extralinguistic evaluation of particular options. I will not spend a lot of time being concerned with the problems of actuation or diffusion of syntactic variants, more in identifying what the variants are and the range of variation allowed within a Minimalist framework. Quantitative methodology will allow me to isolate parameters, to examine what constitutes a parameter, examine the relationships holding between syntactic parameters, and also to examine whether the loci of parameteric variation made available by the Minimalist program are sufficient to account for the observed range of parametric variation in diachronic rather than synchronic data.

Quantitative methodology measures the frequency of new and old parameters in use. The two parameters are discrete and structurally incompatible. In measuring the frequency of parametric options in use, I follow the grammar competition model of Kroch (1989; 1994). Grammar competition follows an S-curve when plotted over time and follows the Constant Rate Effect. The Constant Rate Effect states that for each context in which two parameters are in competition, the rate of change from the old to the new parameter setting will be the same. The frequency of an innovative parameter setting may differ according to context, but the effect of the context on the innovative parameter setting remains constant throughout the change. The crucial point which will become important in chapter 5 is that processes of grammatical competition can be differentiated by the way in which contextual factors condition different grammatical competition processes.

1.2 A Typology of sentential negation

This section will present a cross-linguistic typology of negation, identifying the various forms which negation can take in natural languages. It will also describe some of the well known patterns of variation in negation which recur in natural languages. Principal among these is a pattern of change involving sentential negators known as Jespersen's Cycle (Jespersen 1917). However, before discussing the morphosyntactic forms which negation can take, some brief remarks on the semantic interpretation of negation are necessary here.

1.2.1 The semantic representation of sentential negation

Two types of negation are distinguished in the literature: constituent versus sentential negation (Klima 1964). The distinction is concerned with the scope of negation. Sentential negation takes scope over the clause (1), whereas constituent negation negates a constituent which is smaller than the clause, such as a noun phrase (2).

- (1) a. Ne ferde heo worigende geond land
 NEG went she roaming throughout land
 'she did not go roaming far throughout the land'
 (cocathom1,+ACHom_I,_9:255.194.1744)
- b. I shal not go fro the
 I shall not go from you
 'I shall not leave you'
 (CMAELR4,12.310)
- (2) a. þonne wat ic swiðe lytel oððe nanwiht
 then knew I very little or nothing
 'then I knew very little or nothing'
 (cosolilo,Solil_3:66.31.929)
- b. Alexander cwæð þæt he ondrede God and nænne oðerne on
 Alexander said that he feared God and no other on
 andwerdum life
 actual life
 'Alexander said that he feared God and no other in this life'
 (cocathom2,+ACHom_II,_20:176.79.3898)

Klima (1964) gives some diagnostics for distinguishing constituent and sentential negation readings in other contexts. Sentential negation licenses nega-

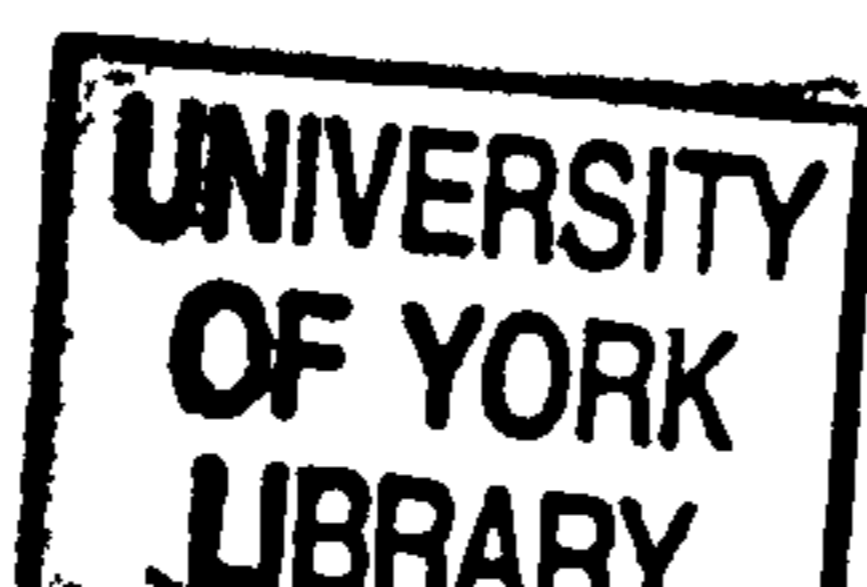
tive polarity items such as *any, ever*, and clauses with sentential negation take positive tag questions. Constituent negation does not license negative polarity items, and clauses involving constituent negation take negative tag questions. The problem of distinguishing constituent and sentential negation is particularly acute for early English. Klima's tests are difficult to use in the absence of native speaker judgements, although I will attempt to apply them to Old English (OE) and Middle English (ME) where possible. I take the view that negatives take sentential scope unless there is unambiguous evidence for a constituent scope reading. For my purposes here, unambiguous instances of constituent negation appear in clauses where the negative phrase is contrasted or coordinated with a non-negative phrase (2).

There is some debate in the semantic literature, discussed at length by Horn (1989) concerning the semantic representation of sentential negation. At issue is whether the negation operator operates on propositions, such that a proposition p is negated to become $\neg p$, or whether the negative operator operates on predicates, giving 'subject - neg - predicate'. While the locus of propositional negation is high, the locus of predicate negation is low. Horn argues that the close association of negation and the finite verb in natural languages supports the view that negation is a mode of predication, and that there are negative predicates. That negation is a mode of predication has been generally assumed in Principles and Parameters theory since Pollock (1989) represented negation using the functional projection NegP within the INFL complex. I will adopt the same view here, assuming that negation is a mode of predication.¹

1.2.2 A typology of sentential negative markers

In many languages negation can be marked on a range of quantifiers or adverbs, for example Present Day English (PDE) *nothing, no-one, never, nowhere*. In addition, languages have negative markers, such as PDE *not*. Unlike negative quantifiers or adverbs which combine negation with some restriction on the negation (*nothing* = NO+thing, *never* = NO+time), negative markers are elements whose only meaning is the logical operator negation (\neg). The Present Day English negative markers are *not* or the contracted clitic form *n't*. The discussion in this section

¹We will see that negation has a tendency to appear clause initially in certain languages, which apparently supports the idea of negation as a propositional operator in these languages. We might perhaps admit that negation can be either a propositional operator, a mode of predication, with the choice of representation a matter of parametric variation (see section 1.2.5 for discussion).



will concern itself with the typology of negative markers. Negative quantifiers and negative adverbs are discussed in section 1.2.3.

From a cross-linguistic perspective, Dahl (1979) distinguishes two types of negative markers. One is part of the morphology of the finite verb, the other is an independent negative particle. Arguably, PDE exhibits both types: *not* is a negative particle which is separable from the finite verb (3a), whilst the contracted *n't* is affixed to the finite verb, moving along with the finite verb in questions for instance (3b).

- (3) a. Did they not warn you?
b. Didn't they warn you?

Dahl (1979, 81) distinguishes between synthetic negation which is a verbal inflection, and analytic negation which employs a separate negative particle.² Dahl (1979) also notes languages which express negation using two negative markers:

In quite a few languages, Neg is expressed by adding TWO particles rather than one. The most well known is French:

- (4) Je ne sais pas 'I do not know'

Jespersen (1917) observes that variation between negative markers is structured across time. Negative markers are reinforced by a second negative adverb or particle, which comes to replace the original negative marker. Jespersen (1917, 4ff) illustrates with examples from the history of Latin, French, Old Norse and English. The changes undergone by English are summarized below (5-7). This sequence of changes has become known in the literature as Jespersen's Cycle. Throughout the thesis, I will use the terms 'unsupported *ne*' to refer to *ne* at stage one, and 'bipartite negation' to refer to *ne...not* at stage two.

- (5) ic ne secge (stage 1: Old English)
 I NEG say
- (6) I ne seye not (stage 2: Early Middle English)
 I NEG say not
- (7) I say not (stage 3: Late Middle English)
 (Jespersen 1917, ex.1-3, 4)

²In using these terms, Dahl situates variability in negation with respect to other typological differences between languages, pointing to the possibility that variation and change in negative markers may be a subcase of a more general shift from a synthetic to an analytic language. Synthetic languages typically have much more inflectional morphology than analytic languages.

The history of negative expressions in various languages makes us witness the following curious fluctuation: the original negative adverb is first weakened, then found insufficient and therefore strengthened, generally through some additional word, and this in turn may be felt as the negative proper and may then in course of time be subject to the same development of the additional word.

(Jespersen 1917, 4)

We see that there is a change in the sentential negation strategies used in early English. In chapter 2, I will discuss the syntax of *ne* and *not* in more detail. In Dahl's typology *ne* corresponds to a verbal inflection and *not* to a negative particle. It is tempting to view Jespersen's Cycle as a case of change from synthetic to analytic forms of negation, in Dahl's (1979) terms. Old English and Early Middle English are characterised by loss of morphological distinctions, for example in case, mood and verbal agreement systems. Loss of case morphology has been argued to have effects on word order (Weerman 1997, Kiparsky 1997), and loss of mood morphology on the development of modal systems, including the infinitive marker *to* which is a non-finite modal (Roberts and Roussou 2003). However, this thesis will examine only changes in negation, leaving aside the broader typological implications of change under Jespersen's Cycle. My central theme will be to provide a syntactic analysis of Jespersen's Cycle which is supported by quantitative data from change in progress.

Chapters 4 and 5 of this thesis discuss the analysis of Jespersen's Cycle and its progress in early English in greater detail. What is interesting about Jespersen's Cycle as a pattern of change is that the new form of negation does not immediately replace the old form, but coexists with it for a time. There is apparent redundancy in the marking of negation at stage two of the cycle. This pattern recurs in many languages, and is not particular to English. I will show that this pattern of change can be reconciled with Minimalist notions of parametric variation, and also accounted for within the grammar competition model (Kroch 1989).

1.2.3 Co-occurrence of negative words

Languages vary in the interpretation they assign to clauses in which two or more negative words co-occur. There are two interpretations available in such clauses: a logically 'double negation' reading in which two negatives cancel each other out, resulting in a non-negative reading, or a 'multiple negation' reading in which

two or more negatives do not cancel each other out, and the clause is assigned a sentential negation reading. Jespersen (1917, 62) states:

When logicians insist that “two negatives make an affirmative” their rule is not corroborated by actual usage in most languages.
(Jespersen 1917, 62)

The contrast between the interpretation of (8) and (9) illustrates the difference between multiple negation and double negation languages. The Romance languages are typically multiple negation languages. (8a) illustrates Spanish multiple negation, and (8b) Italian. The Present Day Germanic languages are typically double negation languages. (9) gives the Present Day Standard English equivalent of (8a), and illustrates the difference in interpretation.

- (8) a. No conozco a nadie (Spanish)
NEG know no-one
'I don't know anyone'
(Rowlett 1998, ex.14a, ch.3,98)
- b. Gianni non dice niente a nessuno
Gianni NEG says nothing to no-one
'Gianni doesn't say anything to anyone'
(Rowlett 1998, ex.15c, ch.3, 98)
- (9) a. I don't know no-one (Double Negation = I know someone)

There are two types of multiple negation which I will distinguish throughout the thesis. I will adopt terminology from van der Wouden (1994) to identify the two types. One type involves the regular negative marker in combination with a negative quantifier or adverb. (10a) illustrates multiple negation with the Italian negative marker *non*. Wouden labels this NEGATIVE DOUBLING. The second type does not involve the negative marker. Instead negative adverbs or quantifiers co-occur with each other. Wouden terms this NEGATIVE SPREAD. (10b) illustrates negative spread in Italian.

- (10) a. Mario non ha visto nessuno (Italian)
Mario NEG has seen no-one
'Mario hasn't seen anyone'
(Rowlett 1998, ex.15a,ch.3, 98)

- b. Nessuno ha fatto niente (Italian)
 No-one has done nothing
 'No-one has done anything'
 (Rowlett 1998, ex.15b,ch.3, 98)

Multiple negation involves redundancy in the morphological marking of negation. In a multiple negation clause, negation is morphologically marked on more than one element, despite the fact that multiple negation clauses receive a negative interpretation just as if they contained only one negative (see (8)). Jespersen (1917) characterises multiple negation as a kind of redundancy. He relates the availability of multiple negation to the position of a language on Jespersen's Cycle.

...repeated negation seems to become a habitual phenomenon only in those languages in which the ordinary negative element is comparatively small in regard to phonetic bulk, as *ne* and *n-* in OE and Russian... The insignificance of these elements makes it desirable to multiply them so as to prevent their being overlooked. Hence also the comparative infrequency of this repetition in English and German, after the fuller negatives *not* and *nicht* have been thoroughly established. (Jespersen 1917, 71-72)

Rowlett (1998) develops a syntactic account of Jespersen's observation which links the loss of multiple negation to the introduction of negative markers such as French *pas* and English *not* under Jespersen's Cycle. I will outline Rowlett's analysis in section 1.4.2, and examine his hypothesis in detail in chapter 6 using historical English data.

The availability of multiple negation readings needs to be parametrised to account for variation between multiple negation and double negation languages. Two issues are relevant. First, what is the most appropriate way to represent the difference between multiple negation and double negation languages in the syntax? I will discuss recent syntactic accounts of multiple negation at length. Second, what is the relationship between ways of marking sentential negation and the availability of multiple negation? In chapter 6, I will bring evidence from early English to bear on these questions.

1.2.4 Redundant negation

Another phenomenon which Jespersen (1917) observes is the redundant use of negative markers. A negative marker may appear in the clausal complements of certain verbs without contributing a negative meaning to its clause. This type of negation has also been termed 'paratactic negation' (Jespersen 1917) or 'expletive negation' (Baghdikian 1979, van der Wurff 1999b). Jespersen (1917, 75) defines the phenomenon as follows:

...*paratactic negation*: a negative is placed in a clause dependent on a verb of negative import like 'deny, forbid, hinder, doubt'. ... It is well known how this develops in some languages to a fixed rule, especially if the negative employed has no longer its full force ...

(Jespersen 1917, 75)

Van der Wouden (1994, 108ff) identifies more contexts for the redundant use of negators, including: verbs expressing fear (11), verbs expressing prohibition (12), some comparative constructions (13), and after certain conjunctions (14) meaning 'before, unless, without'. He claims that all these contexts have negative import.

- (11) J'ai peur qu' il ne vienne (French)
I fear that he not come
'I fear he will come'
(van der Wouden 1994, ch.2, ex.38a, 108)
- (12) J'empêche qu' il ne vienne (French)
I prevent that he not come
'I prevent him from coming'
(van der Wouden 1994, ch.2 ex.40a, 108)
- (13) Il est autre que je ne croyais (French)
It is other than I not believed
'It is other than I thought'
(van der Wouden 1994, ch.2 ex.44a, 109)
- (14) Avant que il ne fasse froid (French)
Before that it not gets cold
'Before it gets cold'
(van der Wouden 1994, ch.2 ex.45a, 109)

We will see that early English had redundant negation at a particular stage of its history. Van der Wouden (1994, 114) postulates a close link between multiple negation and redundant negation, indicating that variation and change in

the availability of multiple negation may influence the availability of redundant negation. I will consider the relationship of redundant negation to Jespersen's Cycle in chapter 4.

1.2.5 The position of negatives in clause structure

Jespersen (1917, 5) notes two tendencies in the placement of negation, first for sentential negation to appear clause initially, and second for sentential negation to immediately precede the finite verb.

...there is a natural tendency, also for the sake of clearness, to place the negative first, or at any rate as soon as possible, very often before the particular word to be negated (generally the verb...). At the very beginning of the sentence it is found comparatively often in the early stages of some languages...

(Jespersen 1917, 5)

Eythorsson (2002) observes this tendency in a range of Germanic languages, including Old Norse (15), Old English (16), and its ancestor Gothic (17).

- (15) Kemr-a nu Gunnarr (Old Norse)
Comes-NEG now Gunnarr
'Gunnarr does not come now'
(Gǫr III 8, (Eythorsson 2002, ex.14a))
- (16) Ne gefrægn ic freondlicor feower madmas (Old English)
NEG learned I friendlier four treasures
'I did not learn of four friendlier treasures'
(Beowulf 1027, (Eythorsson 2002, ex.12b))
- (17) ni hugjaip ei qemjau gatairan witop (Gothic)
NEG think that came-1SG tear-down law
'do not think that I came to tear down the law'
(Matt 5:17, (Eythorsson 2002, ex.12a))

However, the initial placement of negation in these languages entails fronting of the finite verb. Here, we see both a tendency for negation to be adjacent to the finite verb, and also to be placed first. Dahl (1979, 93) observes that 'Neg morphemes occur early in the sentence if the verb does, but not to any greater extent if it does not.' This is evidence for negation as a predicate level operator rather than propositional operator.

Fronting of negation typically entails fronting of the finite verb. However, van Kemenade (2000) observes that there are some negative-initial clauses in Old English in which the initial negative element is separated from the finite verb (18).

- (18) no ic me an herewæsum hnagran talige...
 NEG I myself in prowess poor consider...
 'I do not consider myself poor in prowess'
 (*Beowulf*, 677-8, van Kemenade (2000, ex.11b))

Old English appears typologically anomalous, for reasons I will consider in chapter 3. Variation and change in the position of negatives in clausal structure will inform the syntactic analysis of negative initial clauses. Previous accounts of negative-initial clauses in the history of English (van Kemenade 2000, Ingham 2005) link the disappearance of negative-initial clauses to change in sentential negation strategies under Jespersen's Cycle. However, Jespersen himself, in his (1917) work, does not associate change in the position of negatives to Jespersen's Cycle. Quantitative data showing diachronic change in progress will inform discussion of the relationship between the placement of negation and Jespersen's Cycle in early English.

1.2.6 Summary: the typology of negation and parametric change

The preceding section illustrates the range of typological variation in negative expressions which have been the subject of many syntactic studies in the Principles and Parameters framework. This thesis will take a different perspective on parametric variation. Instead of examining cross-linguistic variation, I will confine my investigations to early English of the period 800-1500CE. My main focus will be what quantitative data from diachronic change reveal concerning parametric change in a large corpus of early English texts.

The preceding discussion makes clear that typological differences in the expression of negation exist not just between languages, but are also manifest as differences between diachronic stages of a single language such as English. Observations by Jespersen (1917) show certain recurrent patterns of variation and pathways of change for which any analysis of parametric change must account. Furthermore, the discussion of typological variation in negation opens up the interesting possibility that the parametric changes to the system of negation may

be quite abstract, if it can be shown that typological changes cluster together. Jespersen (1917) proposes to link changes in sentential negation and the availability of multiple negation. Van Kemenade (2000) links changes in the position of negation in early English to changes in sentential negation strategies. In the light of these proposals it is right to ask how many parameters are required to account for the observed typological variation in negation, and consequently also right to ask how abstract the notion of parameter needs to be to account for the observed variation.

Analysis of diachronic change in real time will address the relationship between typological options over time. This will provide a quantitative demonstration of how abstract the notion of parameter needs to be. Kroch (1989) demonstrates that morphosyntactic changes which are the reflex of a single underlying parametric change will proceed at the same rate over time in all their contexts (the Constant Rate Effect (Kroch 1989)). This makes two very strong predictions. First, if the loss of multiple negation and changes in the position of negation are linked to Jespersen's Cycle these properties will cluster together at certain diachronic stages of the language, such that implicational relationships of the type 'if a language expresses negation using a negative marker which is enclitic on the finite verb, it also exhibits multiple negation' will hold. Second, and more interestingly from the point of view of parametric change, if two or more typological shifts (say changes in sentential negation and the availability of multiple negation) are manifestations of a single parametric change, then there will be parallels between the way these typological shifts will pattern across time when studied quantitatively within the grammar competition model. Thus quantitative data from diachronic change will provide an empirical means of testing theories of parametric variation in a large corpus of early English textual data.

1.3 Syntactic analyses of negation: Principles and Parameters approaches

1.3.1 Representation of negation in clausal structure

Early work in transformational grammar represented negation as a clause peripheral operator (Klima 1964), which lowered into its surface position adjacent to the finite verb. Lasnik (1972) argues that there are two positions for negation

in clause structure: one, a clause initial peripheral operator similar to Klima's, the second a position for NEG associated with English auxiliaries. Analyses of negation in other Germanic languages such as the Scandinavian languages and German have treated the negatives *ekki* (Norwegian) and *nicht* (German) as VP-adjoined adverbials. Two arguments have been advanced for this view. First the similarity between negation and VP adjuncts in respect of object scrambling across them. Definite DPs and pronouns can move leftwards across negation, just as they can move across VP adverbs such as manner adverbs (Diesing 1997). Second, the negative marker has no effect on selectional relations which hold between VP and TP, indicating that negation is not a head.

However, the analysis of negation as an adjoined adverb is unsatisfactory for PDE *not*. The range of positions available to PDE *not* is much more restricted than the range of positions available to adjuncts. It cannot precede the finite verb. In PDE negation is distinct from adverbs in another way. *not* only appears with a subset of finite verbs: modal and aspectual auxiliaries and periphrastic *do*.³ This complicates the syntax of negation considerably as there is a syntactic relationship between negation and the finite verb to be taken into account. Modals, aspectuals and periphrastic *do* are the only finite verbs which appear in the syntactic head Tense (T^0) in PDE.⁴

This relationship between Tense and negation is characterised by Pollock (1989), Ouhalla (1990) and Chomsky (1995, chapter 2) as selection of negation by tense so that negation is the complement of tense. This allows the co-occurrence of *not* with a lexicalised T (*do*, modal or auxiliary) to be stated in terms of Government. The negative head blocks the Government relation between T and V which holds in declarative clauses. As Government holds only between heads, the PDE interaction of negation and the verbal system is accepted evidence for associating a head with negation (Neg^0) in the literature.

Accounts of *do*-support (Chomsky 1995, Lasnik 1999) take *do* to be inserted directly in T as a last resort lexicalisation of Tense features in the absence of other means to lexicalise Tense features by verb-raising or affix-lowering. Lexical verbs do not undergo movement out of V^0 : finite verbs follow adverbials (19), unlike in French (20).

³Han and Kroch (2000), Han (2000) analyse periphrastic *do* as a type of last-resort aspectual marker.

⁴Unlike most other Germanic languages which have generalised V to T movement for all lexical verbs.

- (19) a. John often kisses Mary
 b. *John kisses often Mary
 (Pollock 1989, 367, ex.4a,c)
- (20) a. *Jean souvent embrasse Marie
 b. Jean embrasse souvent Marie
 (Pollock 1989, 367, ex.4b,d)

For Pollock (1989) and Chomsky (1995, chapter 2), negation blocks the relation of Government which would otherwise hold between Tense and the lexical verb. A first approximation of the blocking effect of negation might take *not* as a head and appeal to the Head Movement Constraint, as Ouhalla (1990) does, but this cannot be correct as it stands. There is evidence from the scope interactions between negation and modals that some modals are base generated or merged in a position lower than negation, and move across negation to T^0 during the derivation. This idea is based on the view, first, that inverse scope readings are achieved by reconstruction (Roberts 1998); and second, that an element cannot reconstruct to a position which it has not occupied during the course of the derivation. So, there is evidence for verb movement across negation, at least for some modals.

- (21) There can't be a unicorn in the garden (NOT - POSSIBLE) (Roberts 1998, 115, ex.6a)
- (22) You needn't do that (NOT - OBLIGATION) (Roberts 1998, 116, ex.7b)

So it seems that while negation does not block overt raising of modals and aspectuals across it, it does block other relations between T and V such as the lowering of Tense affixes onto V (Lasnik 1999).⁵

We are left with a paradox: negation must be a head in order to capture the selectional relationship which holds between it and Tense; but *not* does not behave like a head under the head movement constraint (HMC). Pollock (1989, 397) attempts to make *not* exempt from the head movement constraint, by claiming that

⁵The reason lexical verbs fail to move overtly to Tense in PDE is arguably due to the features of T rather than the presence of negation. For Pollock (1989) English V to T movement is blocked by the inability of the lexical verb to raise to a head which is intermediate between T and V, but lower than negation. Han (2000), Han and Kroch (2000) analyse the loss of V to T movement with lexical verbs as the loss of V^0 to Asp^0 movement (where Asp^0 is an aspectual head). Asp^0 to T^0 movement persists in PDE, as demonstrated by movement of aspectual auxiliaries *be* and *have* to T^0 .

it is 'inert for government'. Alternatively, he proposes that *not* might be the specifier of a null negative head (Neg⁰).

The internal structure of English NegP is more problematic. If, as tentatively suggested so far, *not* is the head of NegP, then some version of Rizzi's "relativized" minimality must be adopted since *not* does not block movement of *be/have/do* to TP. Although it lacks the overt (synchronic) support it has in French, one could adopt the alternative idea that NegP in English has a null head and that *not* stands in its specifier position, like *pas* in French. This would allow us to preserve an "absolute" version of minimality, at least for the problems at hand, since the pertinent verbs would move through the empty head position of NegP on their way to Tense.

(Pollock 1989, 412)

This transfers the problem of violation of the Head Movement Constraint to the null Neg⁰. The HMC is circumvented by the claim that the null Neg⁰ can cliticise to V under V to T movement (Pollock 1989, 421), hence it is not a barrier to verb movement. French *ne* offers overt support for the idea of Neg⁰ as a clitic on the finite verb which moves to T⁰. As a clitic head, Neg⁰ will not block verb movement through Neg⁰, instead cliticising to the finite verb. However, in the absence of verb movement, Neg⁰ will block Government between T and V.⁶ The idea that the negative head is a clitic is supported by the behaviour of the negative affix *ne* in French for instance which cliticises to the finite verb as it moves to T⁰. However, the idea does not receive the same sort of morphological support in English, in which the clitic head Neg⁰ must be null. The question to be asked is whether the syntactic and morphological evidence for negation in a head position is sufficient to justify positing a separate negative head (Neg⁰). In chapter 4, I show that a feature driven account provides a new perspective on this question.

Ernst (1992) notes problems associated with the NegP approach. He distinguishes two approaches: one in which *not* is the head of NegP, the other in which *not* is the specifier of a null Neg⁰. The problems which the first analysis poses

⁶Roberts (1998) proposes an alternative analysis to derive the blocking effect of negation using morphosyntactic features. He proposes to associate [neg] features with *do*, modals and auxiliaries. The result is that these verbs can move through Neg⁰, obeying the Head Movement Constraint by virtue of the fact that these verbs have [neg] features. Lexical verbs do not have [neg] features, hence movement through Neg⁰ is blocked.

for the Head Movement Constraint are the apparent HMC violations discussed above. Ernst (1992, 122) says:

First, allowing Neg to *never* have any semantic content or grammatical function (except to license *not* in Spec)... should be troubling: if Universal Grammar permits this sort of structure, the Head Movement Constraint is rendered vacuous. That is, given a configuration like that in (23) [Ernst's ex. 29], where Y^0 appears to have raised over X^0 , it will always be possible to claim that X^0 is really an XP, in spec of (or adjoined to) some empty headed, inert functional projection ... between Y^0 and its trace:

(23) $Y^0_i \dots X^0 \dots t_i$

... Treating *not* as a Spec has the merit of respecting the Head Movement Constraint; it runs into trouble by retaining the maximal projection NegP, with its obligatorily filled Spec, obligatorily empty head, and the problems raised by unconstrained use of the configuration containing them...

(Ernst 1992, 122-3)

Ernst (1992) takes a different approach to the derivation of PDE negative clauses which does not involve selection between Tense and negation. He makes no appeal to notions of Government, and does not posit a separate negative head Neg^0 . For Ernst (1992), the phrase structure of English negation does not involve NegP. Instead, negation is part of the lexical entry for auxiliary verbs such as *don't*, *can't*, *won't*. Negation and the auxiliary form a unit in the lexicon rather than by cliticisation in the syntax. The finding of Zwicky and Pullum (1983) that PDE negative auxiliaries are distinct lexical items supports Ernst's view. Ernst (1992) generates modals, auxiliaries and periphrastic *do* in a verbal $V_{[AUX]}$ projection which is lower than Tense. The PDE negative clitic *n't* is part of the lexical entries of auxiliary and modal verbs. The full negative form *not* is not part of the lexical entry of modals or auxiliaries. Instead, *not* is selected by $V_{[AUX]}$ as its specifier. Only auxiliaries select for the negative *not*. Lexical verbs do not. Hence the restricted distribution of negation in PDE can be accommodated without reference to a separate functional projection NegP.

The problem is how to accommodate periphrastic *do* in this analysis, if *do* is a last resort lexicalisation of T^0 , as Ouhalla (1990) has it. However, both Roberts

(1998) and Han (2000) place periphrastic *do* lower in the structure than TP. For Han (2000) PDE periphrastic *do* originates in Asp^0 , raising to T^0 rather than being inserted in T^0 directly. This view of *do*-support is consistent with Ernst's (1992) account of *do* as a $V_{[AUX]}$. The selectional relationship between *not* and certain verbal forms restricts its distribution, in contrast to adverbs which are unselected. This account eliminates NegP and the problems associated with it, removing the abstract structure associated with negation. While selection of *not* is crucial to understanding its distribution, it is not necessarily part of a NegP. However, the standard Principles and Parameters approach to negation since Pollock (1989) has employed NegP. In chapter 4, I discuss the implications which a morphosyntactic feature based account of negation has for the structural representation of negation using NegP.

1.3.2 The internal structure of NegP

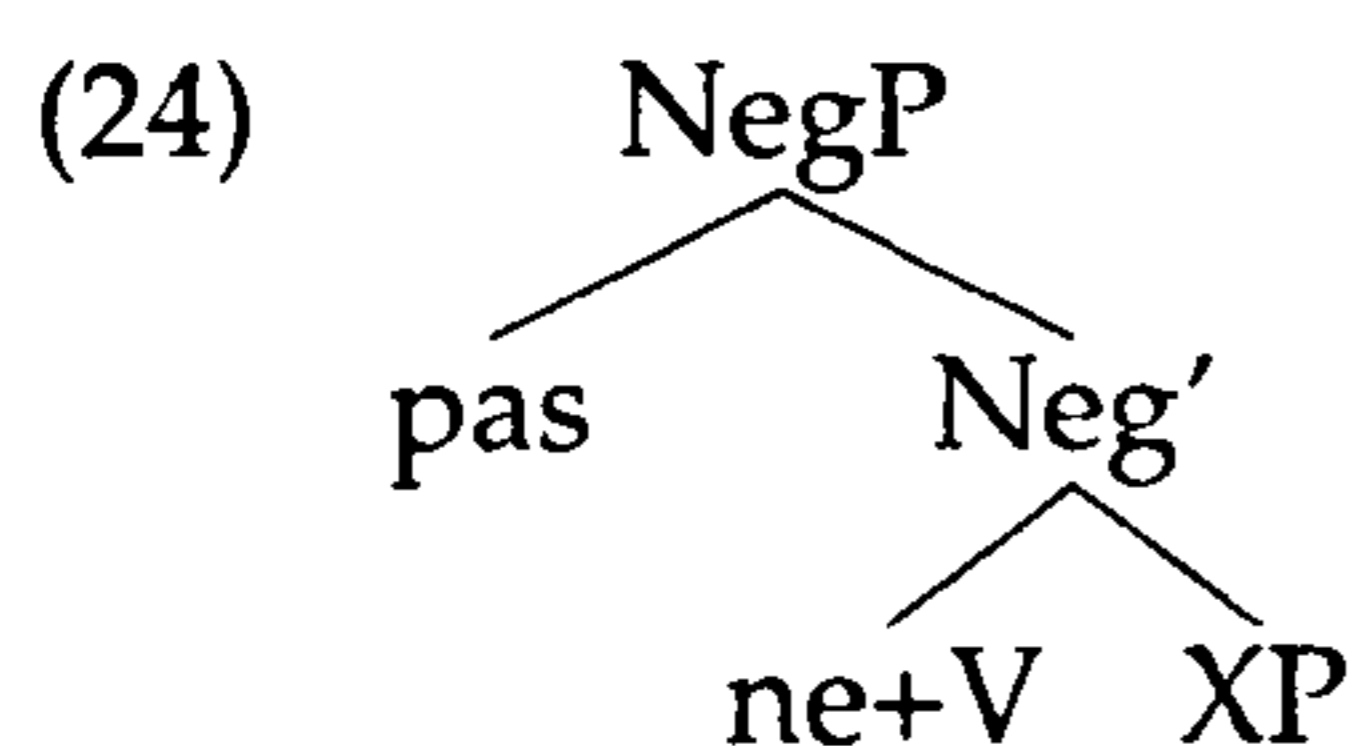
This section elaborates on the representation of negation using NegP, discussing proposals made in recent literature concerning the internal structure of NegP. An X'-theoretic approach makes head and specifier positions of NegP available to host negatives. In section 1.2.2, we saw that negation is predominantly expressed by a single element, but can be represented by two elements. Here I examine how the morphological exponents of negation map onto underlying syntactic structure.

A distinction is made between negatives which are verbal affixes (*ne*) and negative particles (*not*, *pas*, *nicht*). Negative affixes are realisations of the syntactic head Neg^0 . Negative particles are not heads, but adverbial elements. In studies which assume NegP negative affixes and negative particles instantiate the two positions made available within NegP: the head position Neg^0 is for affixal negatives and its specifier position is an adverbial position associated with negative particles. The use of NegP in the analysis follows from a particular approach to the syntax-morphology interface and from the desire to provide a phrase structure template for negation which constrains the range of possible parametric variation.⁷ The empirical evidence for a negative head position is weak. In most languages the negative head is never separated from the finite verb. However, the

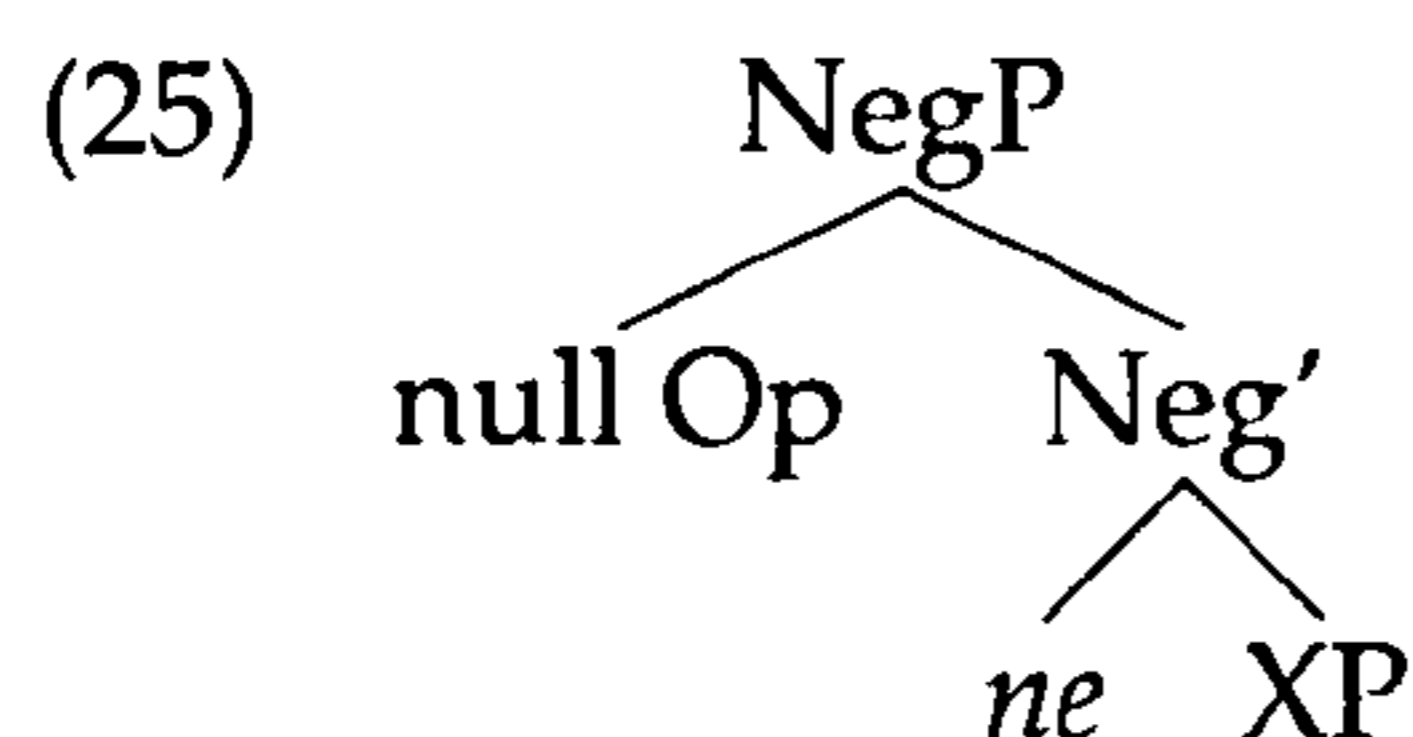
⁷My aim in this thesis is to move away from phrase structure based constraints and provide a restatement of the parametric variation in negation in terms of morphosyntactic features and the relations which hold between features rather than positions. This approach is more consistent with recent Minimalist theories of syntax.

most widely adopted Principles and Parameters approach to syntax-morphology mapping requires NegP, as it maintains that each morpheme projects a functional head in the syntax. Postulating a negative head within an X'-theoretic approach to phrase structure entails that there will also be a negative specifier position.⁸ Part of the justification for associating each morpheme with a syntactic head has been to create specifier positions where required to host lexical material or provide landing sites for movement. A study of the verbal agreement system by Bobaljik and Thrainsson (1998) shows that overt agreement morphology is associated with a more articulated set of positions for subjects and objects and an enhanced range of movement possibilities for arguments. They account for these correlations between syntax and morphology by arguing that agreement markers project syntactic heads and make additional specifier positions available for arguments.

Syntactic arguments have been made for a specifier position of NegP, based first on agreement, and second on the range of movement possibilities in negative clauses. First, there are languages like French which mark negation using two negative markers. These are analysed as having spec-head agreement between the two negative markers (Pollock 1989, Ouhalla 1990) as (24) below.



Second, arguments have been made that all languages with a negative head also have a negative particle in spec,NegP underlyingly (Ouhalla 1990, Haegeman 1995), even when there is no overt morphological evidence for a negative particle. The structure of NegP proposed for these languages is (25).



Evidence comes from the weak island effects induced by negation which were observed by Rizzi (1990). Negation seems to block movement of adverbials across

⁸Analyses of negation as a VP-adjunct in the Germanic languages such as Haegeman and Zanuttini (1996) show that the converse implicational relationship need not hold. The existence of a negative particle or adverbial does not necessarily imply the existence of a negative head or the functional projection NegP.

it (26b) in the same way as embedded *wh*-phrases (26c) do. In (26a), the interpretation in which the adverbial *for this reason* is construed with the embedded clause is licit, indicating that the adverbial has moved out of the embedded clause. In (26b) and (26c) the adverbial *for this reason* can only be construed with the main clause, indicating that the adverbial cannot move out of the embedded clause across the negation. In the brackets following each example, I schematize the main clause and embedded clause interpretations for the adverbial and give the appropriate grammaticality judgements for each interpretation.

- (26) a. It is for this reason that I believe that John was fired
(REASON-BELIEVE or BELIEVE-REASON) (Ouhalla 1990, 217, ex. 46a)
- b. It is for this reason that I don't believe John was fired
(REASON-BELIEVE or *BELIEVE-REASON) (Ouhalla 1990, 217, ex. 46b)
- c. It is for this reason that I know why John was fired
(REASON-BELIEVE OR *BELIEVE-REASON)

These observations underpin Rizzi's theory of Relativised Minimality. Negation, *wh*-questions are both barriers to *A'*-movement. To derive these island effects, Rizzi argues that negation must involve an *A'*-specifier even when negation is morphologically marked on a head only, as in Italian (27).

- (27) a. *Perche hai detto che Gianni e partito?*
Why have-2SG said that Gianni is left?
'Why did you say that Gianni left?'
(REASON-LEAVING or LEAVING-REASON)
- b. *Perche non hai detto che Gianni e partito?*
Why NEG have-2SG said that Gianni is left?
Why didn't you say that Gianni left?
(REASON-LEAVING or *LEAVING-REASON)

Adopting this phrase structure for *NegP* will block the movement of other *A'*-elements such as the adverbial 'for this reason' in (26b) across negation in the same way that movement of adverbials across *wh*-phrases is blocked. This ties in well with an *X'*-theoretic approach to *NegP* which makes both positions available universally in all clauses which have *Neg*⁰.

The third argument which has been advanced for NegP is the extra position which its specifier makes available to host moved negative arguments or adjuncts. This movement possibility, and hence position, is not available to positive arguments or adjuncts. Haegeman (1995) makes much of this argument for NegP. She develops a hypothesis in which the specifier-head relation is a necessary condition on the interpretation of sentential negation, in much the same way as a spec-head relation is required between a *wh*-phrase and a finite verb in interrogatives. She claims that West Flemish negative arguments and adjuncts only attain sentential scope by overt movement into spec,NegP. For Haegeman, movement of negative arguments and adjuncts into spec,NegP is motivated by a licensing condition on sentential negation: the NEG-CRITERION.

1.3.3 The Neg-criterion (Haegeman 1995)

Arguments in the previous section demonstrated that sentential negation in some languages requires two elements in a syntactic relation. The X'-theory approach to NegP makes a syntactic relation available, between a specifier and a head element. Haegeman (1995) develops this idea further, arguing first, that negation in all languages comprises two parts and second that a particular syntactic relation must hold between the two elements involved in sentential negation. She claims that all negatives which are interpreted with sentential scope do so because they appear in a spec-head relation with the functional head Neg⁰. She proposes a condition on sentential negation which is parallel to the condition holding of *wh*-interrogatives (the *wh*-criterion).

(28) The Neg-criterion:

- a. Each Neg X⁰ must be in a spec-head relationship with a Neg operator.
- b. Each Neg operator must be in a spec-head relationship with a Neg X⁰.
- c. NEG-operator: a NEG phrase in a scope position
- d. Scope position: a left-peripheral A'-position (i.e. XP-adjoined or Spec).

(Haegeman 1995, 106)

The existence of a spec-head dependency implies that the negative head is somehow defective, in a way which is problematic. In French and West Flemish for example, the negative head is insufficient to express sentential negation on its own. A combination of two negative markers is required to derive a sentential negation interpretation in these languages, yet as Dahl (1979) notes negation

is an atomic concept which is not easily decomposable. Evidence for this position comes from the existence of redundant *ne* in French and expletive *en* in West Flemish (Haegeman 1995, 162), in which what looks like a negative head appears without a negative interpretation. The evidence of redundant negation indicates that it is the specifier of NegP rather than its head which is semantically interpreted as sentential negation. So the status or role of the negative head is not clear, except that it provides means for negation to achieve a sentential scope position.

Haegeman cites two main sources of evidence for the Neg-criterion:

1. Bipartite negation of the French *ne+V...pas* type, or the West Flemish *nie...en+V* type, in which both NegP positions are realised simultaneously.
2. Movement of negative objects, complements of adjectives, and adjuncts out of VP to a higher scope position which she argues is necessary for a sentential scope interpretation of their negation.

A distinction should be made between the arguments for NegP made in previous sections, and the discussion of the Neg-criterion here. Haegeman makes the following distinction:

The Neg-criterion requires a Spec-head relation between a negative operator and a head with the feature [NEG]. This does not commit us to saying that each negative sentence must contain a NegP. In the case of the wh-criterion Rizzi... does not postulate the the Spec-head relation between the WH-operator and the WH-head be realised on a specific WH projection. Rather the WH-feature is hosted by I or by C. It is conceivable that the NEG-feature is also parasitic on another functional head.

(Haegeman 1995, 127)

This section concerns itself with the syntactic relations holding between negative elements rather than arguments for the functional structure associated with negation. Haegeman (1995, 180) claims V to C movement following an initial sentential scope negative in spec,CP (29a) is an instance of the Neg-criterion which parallels V to C movement in wh-questions (29b) under the WH-criterion. Van Kemenade (2000), Haerberli (1991) propose accounts of Old English negative-initial clauses using the Neg-criterion which I examine in chapter 3.

- (29) a. Never will anyone do this kind of thing (Haegeman 1995, 71, ex. 2e)
 b. Why would anyone do this kind of thing? (Haegeman 1995, 71, ex. 2f)

Haegeman (1995) argues that the movement of negative arguments and adjuncts out of VP is a consequence of the NEG-criterion. Negative arguments and adjuncts which take sentential scope must appear in a spec-head relationship with a negative head Neg⁰. Most of her evidence comes from West Flemish, in which negative arguments and adjuncts with sentential scope obligatorily move out of VP. Haegeman argues that the West Flemish negative head *en-* is only licensed when it appears in spec-head agreement with a negative argument, adjunct or the West Flemish negative particle *nie*.

- (30) a. *da ze [nie ketent me euren kado] en-was*
 that she [*not contented with her present*] en-was
 'that she was not pleased with her present'
 (Haegeman 1995, 134, ex.44a)
- b. *da ze [PPme niets] ketent en-was*
 that she *with nothing* contented en-was
 'that she was not pleased with anything'
 (Haegeman 1995, 134, ex.44b)
- c. **da ze ketent [me niets] en-was*
 that she contented *with nothing* en-was
 'that she was not pleased with anything'
 (Haegeman 1995, 134, ex.44c)
- d. **da ze ketent en-was [PPme niets]*
 that she contented en-was *with nothing*
 'that she was not pleased with anything'
 (Haegeman 1995, 134, ex.44d)
- e. *da Valere woarschijnlijk nie nor us (en)- goat*
 that Valere probably *not to house* (en)- goes
 'that Valere probably does not go home'
 (Haegeman 1995, 117, ex.6a)

These data appear to support the Neg-criterion, but there is some evidence that the fronting of negative constituents is not always consistent with movement to spec,NegP under the Neg-criterion. First, definite DPs may intervene between two moved negative constituents (31). The definite DPs, being non-negative cannot be analysed as NegP specifier or adjuncts.

- (31) a. da Valere an niemand dienen boek (nie) getoogd en-eet
 that Valere to no one that book (not) shown en has
 'that Valere did not show that book to anyone'
 (Haegeman 1995, 116, ex.5a)
- b. da Valere nooit Jan niets (nie) gegeven en-eet
 that Valere never Jan nothing (not) given en has
 'that Valere never gave Jan anything'
 (Haegeman 1995, 116, ex.5b)

The second observation which casts doubt on the Neg-criterion is the behaviour of non-negative quantifier phrases observed by Rullman (1998) for standard Dutch. Both affective or downward entailing quantifiers (32-33) and quantified phrases which are not downward entailing (34-35) typically move out of VP. Rullman claims that instances of quantifiers remaining in VP are marginal. He argues that the movement involved is quantifier raising, for reasons of scope or focus. Svenonius (2000) adopts a similar view that the fronting of negative arguments and adjuncts in Norwegian and Icelandic is the same process which fronts all quantified objects, quantifier raising. It is not clear that the fronting of negative quantifiers is sufficiently different from the fronting of non-negative quantifiers to require a distinct syntactic mechanism.

- (32) a. dat Jan [*met weinig kado's*] tevreden was
 that Jan [*with few presents*] satisfied was
 'that Jan was satisfied with few presents'
 (Rullman 1998, 162, ex. 7a)
- b. ?dat Jan tevreden [*met weinig kado's*] was
 that Jan satisfied [*with few presents*] was
 'that Jan was satisfied with few presents'
 (Rullman 1998, 162, ex. 7b)
- (33) a. dat Jan [*met maar twee kado's*] tevreden was
 that Jan [*with only two presents*] satisfied was
 'that Jan was only satisfied with two presents'
 (Rullman 1998, 162, ex. 8a)
- b. ?dat Jan tevreden [*met maar twee kado's*] was
 that Jan satisfied [*with only two presents*] was
 'that Jan was only satisfied with two presents'
 (Rullman 1998, 162, ex. 8b)

- (34) a. dat Jan [*met de meeste kado's*] tevreden was
that Jan [*with most presents*] satisfied was
'that Jan was satisfied with most presents'
(Rullman 1998, 162, ex. 9a)
- b. ?dat Jan tevreden [*met de meeste kado's*] was
that Jan satisfied [*with most presents*] was
'that Jan was satisfied with most presents'
(Rullman 1998, 162, ex. 9b)
- (35) a. dat Jan [*met veel kado's*] tevreden was
that Jan [*with many presents*] satisfied was
'that Jan was satisfied with many presents'
(Rullman 1998, 162, ex. 10a)
- b. ?dat Jan tevreden [*met veel kado's*] was
that Jan satisfied [*with many presents*] was
'that Jan was satisfied with many presents'
(Rullman 1998, 162, ex. 10b)

Furthermore, there are many languages in which negative arguments and adjuncts do not need to move to spec,NegP overtly in order to gain sentential scope. There is no negative movement in these languages. Haegeman (1995) claims that the Neg-criterion is satisfied covertly in these languages, as each negative lower than NegP is coindexed with a negative operator in spec,NegP. However, movement of negative arguments and adjuncts provides much less clear support for the NEG-criterion than Haegeman claims. It is not clear that the NEG-criterion is required to accommodate movement of negative arguments and adjuncts out of VP. Raising of negative quantifiers may simply result from quantifier raising as Rullman (1998) and Svenonius (2000) claim. The only unequivocal piece of evidence for the NEG-criterion is bipartite negation, and we saw in our discussion of Jespersen's Cycle that bipartite negation constitutes a particular typological stage, subject to parametric variation. This does not provide much evidence for the NEG-criterion as a universal principle in the interpretation of negative clauses.

1.3.4 Feature checking approaches to negative dependencies

Haegeman (1995, 285) claims that the Neg-criterion cannot be reduced to feature checking. The Neg-criterion is a surface structure constraint based on the scope requirements of operators rather than morphosyntactic feature checking. Such

surface structure constraints are problematic to a strictly derivational framework such as Minimalism. More recent work on negation has sought to express the relationship between the two negatives within NegP in terms of morphosyntactic features. Kato (1997, 417) challenges Haegeman's claim that the Neg-criterion cannot be reduced to feature checking:

In this connection, let us examine Haegeman's argument that the criterion cannot be assimilated to feature checking devices. Consider the contrast between (36) [Kato's ex.42] and (37) [Kato's ex.43] (cf. Haegeman (1995, 285)).

(36) Who do you think [CP t[AGR_P t will arrive first]]

(37) *Niets peinzen-k da ze en-weet
nothing think I that she en knows

The point is that, while in (36) [Kato's ex.42] *who* can undergo further movement after it is checked at the specifier of AgrP, *niets* in (37) [Kato's ex.43] must stay in the spec-head configuration with the negative head. Haegeman takes this contrast to be evidence against assimilating the criteria to the feature checking theory. Her argument, however, is not tenable, for the *wh*-phrase bears at least one operator feature in addition to its phi-features and only the latter are checked at the specifier of AgrP. Conversely, example (37) [Kato's ex.43] could be independently filtered out as a violation of economy principles: once it satisfies the criterion, the negative operator need not, hence cannot, move further. Hence the apparent contrast between (36) and (37) disappears. This suggests that the checking theoretic approach to the Affect criterion is worth pursuing. It is also expected that this alternative will reduce the proliferated use of non-overt operators and heads, and possibly eliminate the S-structure requirement on the criterion. (Kato 1997, 417)

I will focus the discussion on Rowlett (1998) who reduces the Neg-criterion to a relation between morphosyntactic features. Under Haegeman's (1995) Neg-criterion, the specifier of NegP is the element which gets interpreted as negative at LF in all clauses. This is an invariant fact about the structure of NegP, irrespective of whether or not the specifier position is realised overtly by a negative particle. Changes in the morphology of the two NegP positions under Jespersen's Cycle have no effect on the syntax and semantics of negation which are

invariant. Rowlett modifies Haegeman's approach so that Jespersen's Cycle is not simply a morphological change, but a morphosyntactic one. He proposes that the introduction of an overt spec,NegP element, such as French *pas* in spec-head agreement with the Neg⁰ *ne*, marks a shift in the syntactic locus of negation from the negative head (Neg⁰) at stage one of Jespersen's Cycle to the specifier position (spec,NegP) at subsequent stages. Rowlett's proposals require a view of spec-head agreement which differs from Haegeman's. For Haegeman (1995, 106), the null operator bears a negative interpretation in all instances. Spec-head agreement is viewed as feature identity: both Neg⁰ and spec,NegP have negative features. In contrast, Rowlett adopts a Dynamic Agreement approach (see Rowlett (1998, 110)), under which a specifier can pass features to its head, but not vice versa. He argues that elements in a spec-head configuration must not bear contradictory features, but need not necessarily agree. Negation will have sentential scope providing Neg⁰ has the feature NEG, irrespective of whether it has an agreeing specifier. Therefore, he argues that there is no need for both spec,NegP and Neg⁰ to bear NEG-features at stage one of Jespersen's Cycle when NEG is marked on the negative head.⁹ Indeed, he argues further that spec-head agreement based on feature identity introduces redundancy into the derivation.

Indeed, if Haegeman is right in her characterisation of negative clauses, the conception of DA [Dynamic Agreement]... could be argued to follow from economy considerations. If all that is needed to mark sentential negation is the presence of the feature [+NEG] on a functional head, then transferring the feature to an operator in specifier position serves no purpose and should arguably not be allowed. Certainly, as an interpretable feature, the presence of [+NEG] on a functional head at LF should not in itself be problematic. Consequently, the presence of a suitable operator in Spec,NegP cannot be motivated for checking reasons.

⁹One potential problem with Rowlett's account is its insistence that negation must be present on a functional head to be interpreted with sentential scope. The distinction between the interpretation of head and specifier positions which he invokes seems difficult to maintain in a system in which scope relations are derived using C-command. Rowlett's definition of sentential negation entails that negative adverbs in the Germanic languages are not adjuncts, but specifiers of a NegP which has a non-overt head. Under this approach, NegP is universal and necessary for LF interpretation of negation, even in languages in which negation behaves like an adverb, and there is no evidence for a Neg⁰.

In contrast, transferring the feature from the operator to the head serves a clear purpose, since, in the absence of such a feature specification on the head, sentential negation will not be marked.

(Rowlett 1998, 112)

By implication, the French head *ne* does not have [NEG] features in the lexicon. It only acquires these features by dynamic agreement with spec,NegP *pas* during the syntactic derivation. Rowlett views Jespersen's Cycle as a morphosyntactic rather than a purely morphological change. Although Rowlett's NegP comprises a spec,NegP operator and a head universally, whether or not the spec,NegP operator has NEG-features is a matter of parametric variation. When the negative head has NEG-features the operator in spec,NegP is an expletive operator without NEG-features, whose motivation seems solely to account for weak island effects under Relativised Minimality. The use of dynamic agreement enables Rowlett to distinguish two types of negative head: one with inherent [NEG] features, and another which acquires negative features by dynamic agreement during the derivation.

Rowlett extends his account of parametric variation in the position of NEG-features to account for the link which Jespersen observes between multiple negation and Jespersen's Cycle. See section 6.3.3 for detailed discussion of Rowlett's approach to multiple negation in relation to early English.

1.3.5 Summary: Negation in the Principles and Parameters framework

In the preceding sections I outlined representations of negation in Principles and Parameters theory. Negation is represented by its own functional projection NegP, which conforms to the X'-theory of phrase structure. NegP always has a specifier position and a head position, although only one or other of these need be morphologically realised in a negative clause. Underlyingly it is assumed that the marker of negation which gets interpreted at LF is the specifier rather than the head of NegP. The negative head must appear in a local spec-head configuration with a negative in spec,NegP in order to be licensed. This is the NEG-criterion. This approach to the phrase structure of negation builds quite a lot of redundancy into the account. The only unequivocal overt evidence for the Neg-criterion comes from bipartite negation at stage two of Jespersen's Cycle, and from Relativised Minimality accounts of the weak island effects associated with

negation. The representation of negation is abstract, comprising two parts, when typological studies such as Dahl (1979) show that negation is marked by a single morpheme in most languages. Under the NegP schema, Jespersen's Cycle only marks a change in the morphological realisation of syntactic positions which are universally present in the syntax. The NegP schema allows a phrase structure account of the relative strength and weakness of negative markers as adverbial and head elements. However, by making Jespersen's Cycle a purely morphological change, it is difficult to see why Jespersen's Cycle takes the form it does, what motivates the cycle, and why it is such a recurrent pattern cross linguistically.

Rowlett's proposals maintain the functional projection NegP in phrase structure, but allow an account of Jespersen's Cycle as morphosyntactic change. His proposals distinguish two forms of *ne*. This proposal has important consequences for the analysis of Jespersen's Cycle. Chapters 4 and 5 will recast Rowlett's proposals in a Minimalist framework and explore their implications.

1.4 Multiple negation

This section discusses the syntactic derivation of multiple negation clauses (38-39) in contrast to the double negation clauses of standard English (40a), standard German (40b) and standard Dutch (40c). Multiple negation languages are languages in which negation can be morphologically marked on more than one word in a sentential negative clause. Double negation languages are languages in which a sentential negative clause contains at most one negative word. In these double negation languages, when more than one negative word is present in a clause, each negative word cancels out the negative force of the others (40). The effect of each negative word in a double negation language is to reverse the polarity of the clause: so a clause with two negators will receive a non-negative interpretation, a clause with three negators will receive a negative interpretation, and so on.

This section will outline syntactic accounts of the contrast between multiple negation and double negation languages. The existence of both languages which permit multiple negation readings (38a-39b) and those which do not (40) indicates that the availability of multiple negation needs to be parametrised to account for both groups of languages.

- (38) a. Je n'ai vu personne
I NEG-have seen no-one

'I haven't seen anyone' (French)

- b. Non o visto nessuno
NEG have seen no-one

'I haven't seen anyone' (Italian)

(Haegeman and Zanuttini 1996, 118, ex.4a-b)

- (39) a. Nessuno ha detto niente
No-one has said nothing
'No-one said anything' (Italian)

- b. Nadie ha dicho nada
No-one has said nothing
'No-one said anything' (Spanish)

(Haegeman and Zanuttini 1996, 118, ex.5b-c)

- (40) a. I didn't say nothing (=I said something)
b. Ich habe nicht nichts gesagt (Standard German)
I have not nothing said
'I haven't said anything'

- c. Ik heb niet niets gezegd (Standard Dutch)
I have not nothing said
'I haven't said anything'

(Haegeman and Zanuttini 1996, 117, ex.2)

Syntactic analyses of multiple negation fall into two broad groups. These are distinguished by their approach to concordant negative words (negative words which appear in multiple negation). Haegeman (1995), Haegeman and Zanuttini (1996) take all words which are negative in form to have a negative semantic interpretation, whether in multiple negation or double negation. Under this analysis of negative words we would expect all languages to be double negation languages: each negative word has negative semantics and will interact with the negative semantics of every other negative word in its clause to alter the interpretation of the clause as a whole. Hence, the derivation of multiple negation readings must involve some adjustment in the meaning of negative words in order to allow more than one of them to appear in a clause which has a reading of sentential negation. Haegeman and Zanuttini (1996) argue for exactly this sort of adjustment in meaning under certain syntactic conditions. Haegeman and Zanuttini (1996) propose a negative absorption rule which operates on particular

syntactic configurations to generate multiple negation readings (see section 1.4.1 below for a more detailed discussion). Haegeman (1995, 139) argues that this rule should be parallel to rules of wh-absorption. In her view, the existence of such a rule follows from the close parallels between negative and interrogative clauses.

The second approach, exemplified by Ladusaw (1992), Deprez (1997), Giannakidou (2000) argues that concordant negative words are negative in morphological form only, and do not convey negative meaning at LF. Therefore, it is possible for any number of concordant negative words to appear in a negative clause. Concordant negatives are subject to syntactic licensing conditions which are much the same as the licensing conditions on PDE negative polarity items such as *any, ever*. They must co-occur with a clausemate negative marker which can be interpreted at LF, which will both give the clause its sentential negation interpretation and license the concordant negative words. In the following sections, I will examine each of these approaches in more detail.

1.4.1 The Neg-absorption approach

Neg-absorption is proposed by Haegeman (1995), Haegeman and Zanuttini (1996). A mechanism of factorization derives multiple negation readings from negative quantifiers (which have the semantic representation $\forall\neg$) which have undergone raising to achieve sentential scope at LF, and are thereby structurally adjacent, all adjoined to the same maximal projection. For Haegeman and Zanuttini (1996), quantifier raising (QR) is responsible for the raising of negatives to undergo absorption in a VP adjoined position. For Haegeman (1995), negatives raise to spec,NegP under the Neg-criterion, where absorption takes place. The process of absorption or factorization is represented in (41).

$$(41) \quad [\forall x\neg][\forall y\neg][\forall z\neg] = [\forall x, y, z]\neg$$

Haegeman and Zanuttini (1996, 139) comment:

...instead of creating two (or more) consecutive instances of a universal quantifier each followed by an instance of negation, negation is factored out and the two (or more) universal quantifiers become one binary (or n-ary) quantifier.

(Haegeman and Zanuttini 1996, 139)

In Haegeman (1995), negative factorisation, or absorption (the latter term is used in Haegeman (1995)) is a by-product of the Neg-criterion. Recall that the

Neg-criterion associates every sentential scope negative word or phrase into a position of sentential scope during the syntactic derivation. The problems I discussed in respect of the Neg-criterion (section 1.3.3) are also problems for the account of negative absorption. First, not all negatives which undergo absorption are structurally adjacent. Definite DPs can intervene between two negative phrases, yet multiple negation readings, and therefore absorption remains possible.¹⁰ Structural adjacency cannot be a condition on negative absorption.

Whilst the account of negative absorption has some success in capturing the West Flemish data, there are other languages (such as the Romance languages French, Spanish, Italian) which have multiple negation with negative constituents which are internal to VP. There are two options to deal with these cases: either negative constituents undergo quantifier raising to their scope positions covertly at LF, or they are interpreted in their scope positions by virtue of coindexation with a higher element. The latter approach is taken by Haegeman (1995, 201ff). There are two possible implementations of this approach. A null operator in *spec,NegP* unselectively binds all negative constituents in its scope; or each negative constituent is bound by its own operator. In the latter case, factorization of the negative operators in *spec,NegP* has to take place to derive a multiple negation reading.

The neg-absorption approach faces conceptual problems. Giannakidou (2000, 483) argues that asymmetries between multiple *wh*-constructions and multiple negation constructions support an analysis of the two as distinct sets of dependencies. The parallels between *wh*-absorption and negative-absorption on which Haegeman and Zanuttini (1996) base their theory are not clear. Given these asymmetries, Giannakidou (2000, 483) notes that the role of negative absorption is particular to multiple negation rather than being a subcase of a more general absorption rule. This makes multiple negation look more syntactically anomalous and more marked than its widespread occurrence in many languages would seem to indicate.

As a theoretical device, negative absorption is also problematic. Negative absorption involves removing LF interpretable features during the course of the derivation in order to obtain multiple negation readings. This appears to be a violation of the Principle of Full Interpretation (Chomsky 1995, 27). Negative

¹⁰However, Haegeman and Zanuttini (1996) observe that if the intervening element is scope bearing, such as a quantifier, multiple negation readings are not possible, indicating that scope bearing elements create islands for multiple negation.

absorption therefore poses a problem for Minimalist frameworks in which the Principle of Full Interpretation holds.

Finally, it is not clear how to accommodate the observed cross-linguistic variation in the availability of multiple negation to the principle of negative-absorption. Negative absorption applies wherever two or more negatives are in their scope positions, and adjacent to each other. It is a principle of the syntax and as such should not be subject to parametric variation. Haegeman and Zanuttini (1996) claim that the availability of NegP is linked to the availability of multiple negation. This might offer some means to parametrise multiple negation, along the lines that NegP is required for negative absorption to take place. However, it is not clear how such a condition could be formulated. Haegeman (1995, 139) makes the availability of negative absorption contingent on the Neg-criterion, but she also claims that the Neg-criterion is a universal principle of the grammar, which leaves unresolved the problem of parametrising multiple negation.

We might parametrise the Neg-criterion and NegP, but it is not clear that NegP is required for negative absorption to take place. Indeed, Haegeman and Zanuttini (1996) argue that negative absorption takes place when negative quantifiers undergo quantifier raising to VP-adjoined positions, either overtly or at LF. The negative head is not implicated in this account of multiple negation, so it is unclear that the difference between the availability of multiple negation in Germanic and Romance languages that Haegeman and Zanuttini (1996) observe is always linked to the availability of a negative head. Obviously, negative doubling with a negative head is linked to the availability of the head, but other forms of multiple negation involving arguments and adjuncts need make no reference to the negative head, only to the scope position of negative quantifiers. The account does not rule out multiple negation between a VP adjoined negative marker and a negative quantifier within VP in German or Dutch providing both are in their scope positions at some level of representation. Hence, multiple negation should be possible in these languages, contrary to fact.

1.4.2 Multiple negation and Jespersen's Cycle

Jespersen (1917) observes a link between the form of sentential negation used in a language, and the availability of multiple negation in that language. He describes the relationship as follows:

... repeated negation seems to become a habitual phenomenon only in

those languages in which the ordinary negative element is comparatively small in phonetic bulk, as *ne* and *n-* in OE and Russian, *en* and *n-* in MHG [Middle High German], *ou* (sounded *u* in Greek), *s-* or *n-* in Magyar. The insignificance of these elements makes it desirable to multiply them so as to prevent their being overlooked. Hence also the comparative infrequency of this repetition in English and German, after the fuller negatives *not* and *nicht* have been fully established.

(Jespersen 1917, 72)

This is a condition on multiple negation, taken up in the syntactic accounts by Haegeman and Zanuttini (1996) and Rowlett (1998). Haegeman and Zanuttini (1996) argue that NegP is necessary to license multiple negation. Hence they argue that the difference between languages with and without multiple negation is in the presence of a functional category NegP which C-commands TP. The negative head is implicated in multiple negation. One way to parametrise multiple negation is to parametrise NegP.¹¹ However, in the previous section, I cast some doubt on the link between NegP and multiple negation in Haegeman and Zanuttini's analysis. They claim that languages such as modern German or Dutch are not multiple negation languages because they mark negation by means of a VP-adjunct.

The negative markers in Germanic languages, as illustrated by German *nicht*, Dutch *niet*, Swedish *ikke* etc will be taken to be adverbial elements. We assume that they are adjoined to VP or a projection dominating VP. We tentatively suggest that these languages in fact lack a negative head projecting a NegP dominating Infl.

(Haegeman and Zanuttini 1996, 124)

The implication of their proposal is that NegP is not universally available at all stages of Jespersen's Cycle. However, as I observed in the previous section, it is unclear how parametrising NegP has any impact on the availability of negative absorption as formulated in Haegeman and Zanuttini (1996), and hence how the NegP and multiple negation are linked.

¹¹Haegeman and Zanuttini (1996, fn.11) observe that PDE is problematic to the correlation between NegP and multiple negation. Pollock (1989) and others argued that PDE has NegP, yet the standard language does not have multiple negation.

Rowlett (1998) takes a different approach to the relationship between Jespersen's Cycle and multiple negation. Recall, that for Rowlett, the move to bipartite negation under Jespersen's Cycle marks a shift in the locus of negation (the NEG-feature) within NegP from the head to the specifier position. This shift in the locus of negation from Neg⁰ to spec,NegP affects the availability of multiple negation. With Neg⁰ the locus of negation, multiple negation is freely available. With the introduction of a negative operator in spec,NegP, multiple negation is no longer licit. Rowlett formalises this as Jespersen's Generalisation (42).

(42) **Jespersen's Generalisation:**

A language is an NC [Negative Concord, or multiple negation] language iff the regular marker of pure sentential negation is not associated with SpecNegP.

(Rowlett 1998, 87)

Rowlett (1998, 100) takes Jespersen's Generalisation to apply across a language as a whole. His prediction is strong: if a language can mark negation using phrasal negator in spec,NegP, it is not a multiple negation language. Rowlett (1998) derives Jespersen's Generalisation using a modified version of the binding theoretic approach Progovac (1994) proposes for NPI licensing. Negative constituents in multiple negation must not be A'-bound by a negative operator in spec,NegP. The Neg⁰ does not A'-bind negative constituents in its complement, so multiple negation is licit. By adopting an approach to scope based on binding, Rowlett is able to claim that [NEG] on a negative head does not interact scopally with [NEG] on a negative constituent in the complement of Neg⁰. Under his approach to multiple negation, all negatives are interpreted as negative at LF, but can co-occur in certain configurations when no negative takes scope over any other. However, the use of binding relations to determine scope interactions does not seem compatible with the simplest Minimalist assumptions. If a different approach to scope relations is taken, such as the more widely assumed C-command approach, the distinction between configurations which underpin Rowlett's account cannot be maintained.

The distribution of multiple negation predicted under Rowlett's (1998) account differs from its predicted distribution under Haegeman and Zanuttini's (1996) account. For Rowlett, multiple negation is not licensed at stage two of Jespersen's Cycle because the locus of negation is spec,NegP. For Haegeman and Zanuttini, multiple negation is licensed at stage two of Jespersen's Cycle because

a negative head is present at this stage. I discuss the relationship between multiple negation and Jespersen's Cycle in chapter 6. My aims there are twofold. First, to examine the empirical basis to relate Jespersen's Cycle and multiple negation within a large corpus of diachronic data from early English. Second, to provide a syntactic hypothesis within a Minimalist feature-based syntax which can accommodate these data.

1.4.3 Multiple negation as negative polarity item licensing

This section will discuss in detail the view that concordant negatives are negative in morphological form only, and are subject to licensing conditions similar to those holding of negative polarity items (NPIs) such as PDE *any, ever*. This view of multiple negation is proposed in the semantic literature by Ladusaw (1992), van der Wouden (1994), and taken up in syntactic accounts by Deprez (1997), Giannakidou (2000). The basis for this work is a compositional approach to multiple negation, in contrast to the Neg-absorption approach which involves some kind of feature deletion process during the syntactic derivation. Within a compositional approach to multiple negation, only one of the elements which has negative morphology can bear Neg-features which are interpreted at LF. The gist of Ladusaw's proposal is that there are two possible meanings assigned to negative constituents like *no-one*. Broadly the difference between multiple negation and double negation languages is that negation is associated with the clause as a whole in a multiple negation language, whereas negation is associated with individual lexical items in a double negation language. In double negative languages all negative words are individually associated with negation. In multiple negation languages, concordant negative words are licensed only when they are in a relationship with a negative operator. Variation in the cross-linguistic availability of multiple negation is reduced to a lexical difference between languages; whether or not negative words are interpreted as negative at LF.

... the duplicity of the negative argument expressions in LF is a reflex of a simple lexical ambiguity: that they are ambiguous between negative quantifiers and negative polarity items, which are known items of limited distribution.

(Ladusaw 1992, 246)

Recall that I distinguished two types of multiple negation following van der Wouden (1994): negative doubling which involves a marker of sentential nega-

tion, and negative spread which does not. The negative operator which licenses concordant negatives may be an overt negative marker (negative doubling) or non-overt operator (negative spread). In Ladusaw (1992), the difference between negative doubling and negative spread is simply a matter of the morphology associated with the negative operator in the syntax. In negative doubling the operator is morphologically realised. In negative spread it is null.

This account seems preferable to Neg-absorption, as it preserves compositionality, and is in keeping with the spirit of the Minimalist framework. Lexical ambiguity is the only means to represent variation in Minimalism. The derivational component is invariant. Hence Ladusaw's approach is promising. However, more work is required to ascertain the morphosyntactic features of concordant negatives and to establish appropriate licensing conditions which make reference to these features.

Ladusaw (1992) takes negative constituents within the scope of negation in multiple negation languages to be subject to the same type of licensing requirements as NPIs. Both are analysed as indefinites without quantificational or referential force. Indefinites require binding by an existential in order to be interpreted. Negative polarity items impose the additional restriction that this existential should be negative. However, licensing conditions for concordant negatives differ from licensing conditions for NPIs. NPIs are licensed in interrogatives (43), conditionals (44), in the scope of certain quantifiers (45).

(43) When did you last see anyone doing that?

(44) I'm sorry if anyone thinks this is unusual

(45) Few people know anything

Ladusaw distinguishes indefinites which require negation as a licenser, from indefinites like NPIs which can be licensed by the more general class of monotone decreasing operators. He proposes a licensing condition by which NPIs must be C-commanded by a negative operator located in NegP, either as a negative marker in spec,NegP, or Neg⁰, or a negative argument or adjunct which has moved to or though spec,NegP. He claims multiple negation with concordant negatives in VP always requires the negative marker or some other negative to be present in a position which dominates VP. Both Haegeman and Zanuttini (1996) and Ladusaw (1992) claim that at least one negative must C-command the VP in a multiple negation clause (46).

- (46) a. She didn't give nothing to nobody (Non-standard English)
(Ladusaw 1992, 250, ex.19c)
- b. Mario non ha parlato di niente con nessuno (Italian)
Mario NEG has spoken of nothing with no-one
'Mario hasn't spoken to anyone about anything'
(Ladusaw 1992, 251, ex.21b)

Ladusaw (1993) suggests that changes in the licensing conditions on concordant negatives will lead to the loss of multiple negation, and the reinterpretation of concordant negatives as negative quantifiers at LF. He argues that this is linked to changes under Jespersen's Cycle. One prediction that arises clearly out of Ladusaw's analysis of negative constituents as NPI indefinites is that the distribution of negatives and negative-polarity items will be parallel. Giannakidou (2000) discusses these predictions in detail. She argues on the basis of the following diagnostics that concordant negative words in some languages with and without multiple negation are quantifiers rather than indefinites as Ladusaw (1992) proposed. The following properties distinguish concordant negatives which are quantificational from NPIs which are indefinites. First, negatives in some languages can be modified by *almost* (47).

- (47) a. K' (en)-een oast niets nie gezeid
I (en)-have almost nothing said
'I said almost nothing'
- b. *I didn't say almost anything
(Haegeman 1995, 129, ex.30)

Second, the two are subject to different locality constraints. In some languages multiple negation is clause bound, whereas NPI indefinites enter into dependencies across clause boundaries (48). Giannakidou argues that the clause boundness of multiple negation comes from locality restrictions on quantifier scope which follows if concordant negatives are quantifiers rather than indefinites in certain languages.

- (48) You didn't say that he wanted anything

This is one of the properties of multiple negation which distinguishes it from multiple-wh dependencies. Giannakidou (2000, 471) claims that multiple negation is unlike multiple-wh dependencies, which can be established across clause

boundaries. She takes this as one reason not to assimilate multiple negation and multiple *wh*, as Haegeman (1995) proposes.

On the basis of these diagnostics, Giannakidou (2000) proposes that there are two types of multiple negation languages, distinguished by the properties of the concordant negatives. In one type, the concordant negatives are exactly parallel to NPIs in their distribution, which indicates that they are indefinites. In the other, NPIs and concordant negatives have distinct distributions, indicating that whilst NPIs are indefinites, concordant negatives are quantificational.

1.4.4 Minimalist Approaches to Multiple Negation

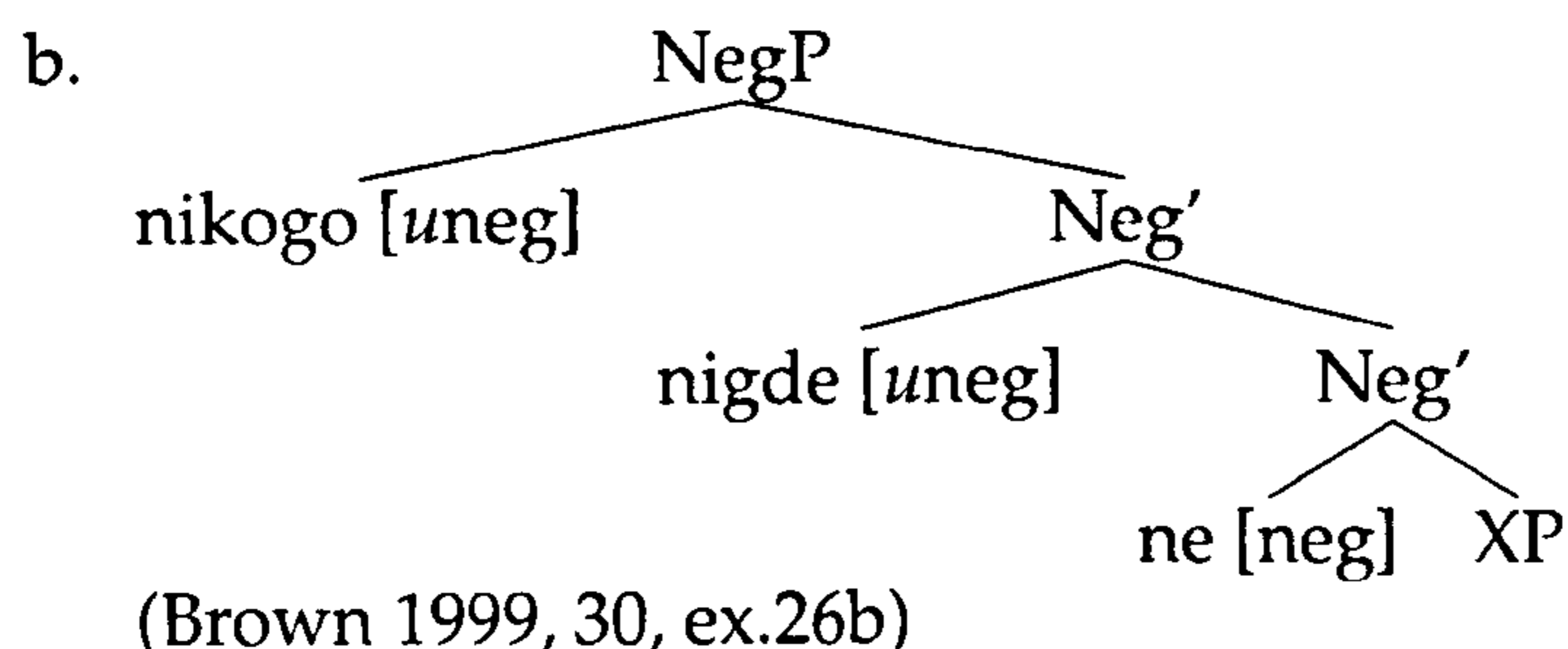
I will discuss three broadly Minimalist approaches to multiple negation in this section: the analysis of Russian multiple negation by Brown (1999), the analysis of non-standard English by Adger and Smith (2003), and the observations on French by Roberts and Roussou (2003). Within a Minimalist framework, morphosyntactic feature checking is the only way to establish dependencies between elements in the syntax. There are strict constraints on the configurations in which features can be checked, so it is an empirical matter to determine whether the configurations of negative elements involved in multiple negation can be accommodated within this restrictive system. Feature checking takes place between interpretable and uninterpretable features. Therefore, we need to determine first of all what features are checked in the licensing of multiple negation, and which of the negative elements involved in multiple negation has interpretable or valued features and which has uninterpretable or unvalued features.

Roberts and Roussou (2003) take an Agree based approach to negative doubling (based on the mechanism of Agree proposed by Chomsky (2000)). Negative doubling involves a probe-goal relation, in which either probe or goal, or both, may be spelled out with negative morphology. For multiple negation to be licit, at least one negative in multiple negation must be a probe. All negators in Present-Day Standard English are goals rather than probes, hence the lack of morphologically overt multiple negation. The difference between probes and goals reduces to the difference between valued and unvalued features in Chomsky's (1999) system.¹²

¹²The distinction is not as clear in Roberts and Roussou's system as they do not distinguish valued and unvalued features. Their account of multiple negation appears to be one analysis in which the distinction is required.

Both Brown (1999) and Adger and Smith (2003) start from the position that the sentential negative marker is a head with interpretable negative features, against which the uninterpretable features of each concordant negative constituent must be checked during the derivation. This checking operation iterates for each concordant negative, leaving only the interpretable [neg] feature of the negative head to be interpreted at LF. This is consistent with the mechanism of feature checking proposed in Chomsky (1995). So, the Russian clause in (49a) has the syntactic representation in (49b), where [μ F] denotes an uninterpretable feature, and [F] denotes an interpretable feature.

- (49) a. Ja nikogo nigde ne videl
 I no-who no-where NEG saw
 'I didn't see anyone anywhere'
 (Brown 1999, 30, ex.26a)



These accounts share something with the lexical variation approach taken by Ladusaw (1992). Negative words vary in their ability to be interpreted as negative at LF because of a difference in their morphosyntactic features in multiple negation and double negation languages. In multiple negation languages they have uninterpretable [μ neg] features. In double negation languages, they have LF-interpretable [neg] features.

In Chomsky (1995) feature checking is by overt or LF movement in a spec-head configuration. Feature checking is motivated by the need to check uninterpretable features of the moved element against a head with matching interpretable features ('greed'). Whilst the mechanism of feature checking assumed by Brown (1999), Adger and Smith (2003), follows Chomsky (1995), it is not consistent with the mechanisms of feature checking in subsequent versions of the theory (Chomsky 1999; 2000). In Chomsky (2000) a relationship is established between a probe and a goal. The probe has an uninterpretable feature, and must C-command a goal with a matching interpretable feature for feature checking to take place. The probe has uninterpretable or unvalued features, so feature check-

ing is done in order to check features of the probe, rather than the goal. Functional heads bear uninterpretable features which allows them to act as probes and initiate a relationship with the closest C-commanded matching feature. There is one to one matching between uninterpretable features of the probe and interpretable features of the closest matching goal. This is problematic to multiple negation in which a negative head may co-occur with several concordant negative phrases. In multiple negation, it is clear that only one morphologically negative item has interpretable [neg] features. The problem is how to implement feature checking so that a negative head can co-occur with several concordant negative phrases, whilst parametrising multiple negation to take account of multiple negation and double negation languages. Little work has been done to derive multiple negation in the latest probe-goal framework of feature checking (see chapter 6 for discussion). It remains to be seen whether multiple negation can be adequately explained as feature checking in this model, or whether we need a semantic licensing condition on concordant negatives such as the one Ladusaw (1992) proposes.

1.4.5 Summary: multiple negation in the Principles and Parameters framework

The issues relevant to multiple negation are how to characterise the relationship between negative words in multiple negation within a syntactic framework, and how to parametrise multiple negation in order to derive both multiple negation and double negation languages. An important secondary issue is to establish the link, if any, between changes in sentential negation strategies and changes to the availability of multiple negation. We have seen two broad approaches to multiple negation, one syntactic, the other lexical. The syntactic approach is 'negative absorption'. Negative quantifiers in particular syntactic relations to each other can undergo absorption, so that the negative force of each quantifier is factored out and we are left with a sentential negation interpretation. For negative absorption to occur, Haegeman and Zanuttini (1996) argue that negative quantifiers must escape VP.

Haegeman (1995) argues that each negative must satisfy the Neg-criterion (at NegP) for negative absorption to take place. I noted two problems with negative absorption. First, it faces difficulties in accounting for typological variation in the availability of multiple negation. Second, this derivation of multiple nega-

tion does not preserve compositionality: a syntactic process alters the semantic interpretation of negative lexical items.

The second approach to multiple negation is to treat concordant negatives as items licensed by negation. The licensing conditions on concordant negatives are similar to those on NPIs, with important differences which indicate that concordant negatives are quantificational whilst NPIs are indefinites. This approach accommodates parametric variation in multiple negation as a lexical choice, a matter of variation in the interpretation of particular lexical items. Concordant negatives must be licensed, whilst negative quantifiers are self-licensing. However, this approach leaves unanswered some important questions concerning the representation of the difference between concordant and non-concordant negatives, and particularly concerning the licensing conditions on multiple negation. It is not clear whether the difference between concordant and non-concordant negatives can be represented syntactically, or whether the licensing conditions on concordant negatives are syntactic or semantic. Proposals have been made which subsume multiple negation under morphosyntactic feature checking. However, these proposals require further work, particularly in the light of the probe-goal system of feature checking proposed in Chomsky (1999; 2000). Only then will we be able to say with confidence that the parametric difference between multiple negation languages and double negation languages is a difference in the morphosyntactic features which negative quantifiers bear in the lexicon.

Another problem of this approach is that it is not immediately clear how to relate the availability of multiple negation to changes in sentential negation strategies under Jespersen's Cycle in line with the observation that Jespersen himself makes (Jespersen 1917, 72). There are two views of the relationship between multiple negation and Jespersen's Cycle, which make different predictions for the availability of multiple negation at stage two of the cycle. Rowlett (1998) argues that the introduction of a secondary negator, such as English *not* at stage two, correlates with the loss of multiple negation. Haegeman and Zanuttini (1996) argue that the presence of a negative head (Neg^0) distinguishes multiple negation and double negation languages. Neg^0 is present at stages one and two of Jespersen's Cycle, hence multiple negation should be available at both stages.¹³ The relationship between the syntactic representation of sentential negation and

¹³Although we should note that a negative head marker is not overtly present in negative spread between two or more negative quantifiers. So a null Neg^0 is required in these constructions.

multiple negation is therefore important, changes in the two areas are linked by both Haegeman and Zanuttini (1996) and Rowlett (1998), albeit in different ways.

1.5 The present study: structure of the thesis

This thesis will discuss the syntactic representation of negation in early English with particular reference to parametric variation and diachronic change. First I establish the range of variation in early English negation and discuss the syntactic representation of negation in early English. I then turn to the analysis of Jespersen's Cycle. Finally, I discuss multiple negation in early English. The thesis comprises six chapters in addition to this one, each taking a different issue in the representation of negation, as set out below.

1. The locus of sentential negation: does the analysis of early English negation require the functional projection NegP? Chapter 2 presents an inventory of early English sentential negators and the evidence which these provide for NegP.
2. The derivation and loss of negative initial clauses is examined in chapter 3. The discussion focuses on proposals by van Kemenade (2000) to link the loss of negative initial clauses to the introduction of secondary negators under Jespersen's Cycle. I will also examine the relationship between Old English (OE) negative initial clauses which involve fronting of the finite verb and those which do not.
3. Chapter 4 develops a Minimalist morphosyntactic feature based approach to Jespersen's Cycle and considers the status of the functional projection NegP in a feature driven system.
4. Chapter 5 shows that the feature based analysis of Jespersen's Cycle (outlined in chapter 4) is supported by quantitative data showing Jespersen's Cycle in progress in early English. This chapter demonstrates that a model of Jespersen's Cycle as grammatical competition is possible if we adopt a feature based perspective on parametric change in sentential negation. This approach is supported by quantitative data.
5. Multiple negation is given extensive treatment in chapter 6. This chapter considers the relationship between multiple negation and Jespersen's Cycle.

It develops an analysis of multiple negation in terms of morphosyntactic features which is integrated with Jespersen's Cycle in a novel way. It assimilates multiple negation to a process of morphosyntactic feature checking, and proposes a program of further research in this area.

6. The final chapter concludes the thesis, showing how the analysis in the preceding chapters provides a coherent syntax of early English negation, and discussing some of the implications of my findings for the representation of morphosyntactic change.

Chapter 2

Patterns of Early English negation

2.1 Introduction

This chapter provides an inventory of sentential negation strategies employed in Old and Middle English prose and establishes the range of variation in Old and Middle English, locating Old and Middle English in respect of Jespersen's Cycle (Jespersen 1917). Throughout this thesis, my analysis will be based on data from two electronic corpora: the *York-Helsinki Parsed Corpus of Old English Prose* (YCOE, Taylor et al. (2003)), and the second edition of the *Penn Parsed Corpus of Middle English* (PPCME2, Kroch and Taylor (2000a)). The early part of this chapter will comprise a description of the historical data used throughout the thesis, and an overview of my assumptions concerning the syntax of Old and Middle English within the Principles and Parameters model. I examine distributional evidence for two classes of sentential negators in both Old and Middle English, which are distinct from negative adverbs or adjuncts, one a verbal affix, and another an adverbial negative particle. My arguments will make crucial reference to analyses of Old and Middle English clause structure proposed by Haeberli (2001; 2002b).

An understanding of Jespersen's Cycle in English needs to establish which patterns of negation constitute each stage of Jespersen's Cycle. This is not a simple matter. At stage two of Jespersen's Cycle, when two negative markers co-occur we need to distinguish exponents of this stage from other forms of multiple negation with negative adverbs which are not involved in Jespersen's Cycle. Frisch (1997, 44) observes ambiguity between stage two of Jespersen's Cycle (*ne...not*), and multiple negation involving an adjoined adverb *not* which does not constitute stage two of Jespersen's Cycle. The sentential negator *not*, evident at

stages two and three of Jespersen's Cycle traces its antecedents back to an adjunct or adverbial form, Old English *nawiht*. So, this chapter will address the basis for distinguishing adverb *not* from sentential negator *not*, and also the historical evidence for the transition from adjunct to sentential negator in the textual record.

The same questions arise concerning the status of Old English *na* as adverb or sentential negator, since van Kemenade (1999; 2000) claims that *na* is a sentential negator with the same properties as later English *not*. This claim is disputed by van Bergen (2003), Ingham (2005).

The distribution of both *na* and *not* elements is studied in order to determine the syntactic basis on which sentential negators can be distinguished from negative adverbs. Two aspects of their distribution will be relevant: their position relative to subjects, objects and finite verbs, and their readiness to co-occur with other negative markers. These facets of distribution will be sufficient to establish whether *na* and *not* are distributionally equivalent. They will also provide grounds to identify any changes to the distribution of *na* or *not* over time, which may indicate a change in status from an adverb to a sentential negator. Distinguishing sentential negators from adverbs on positional grounds is very difficult. The positions available to *na* and *not* are those available to adjoined adverbs. However, I show that there are sufficient distributional grounds to make the required distinction between both ME *not* and OE *na* and negative adverbs.

Discussion of the appropriate syntactic representation of negation at each stage of Jespersen's Cycle is left aside until chapter 4, when I enter into a detailed discussion of the structural representation of negation in the clause, and the syntactic mechanisms required to deal with the dependencies between negative markers at stage two of Jespersen's Cycle. Here, I establish the empirical facts on which the discussion in chapter 4 is based.

2.2 The Early English data

2.2.1 The Early English corpora

The Early English data are split into two broad periods: Old English (c.800-1150CE) and Middle English (c.1150-1500CE). Three electronic corpora supply the data for this thesis. The York-Toronto-Helsinki Parsed Corpus of Old English Prose (YCOE) is the source of the Old English prose data (Taylor et al. 2003). The Penn-Helsinki Parsed Corpus of Middle English, second edition (Kroch and Tay-

lor 2000a) (PPCME2), is the source of the Middle English prose data. The two prose corpora each comprise 1.5 million words of written historical English. The corpora do not represent all genres, dialects or sociolects. There is a bias in the historical record towards religious texts, particularly in the OE and EME periods.

The York-Helsinki Parsed Corpus of Old English poetry (Pintzuk and Plug 2001) is the source of the Old English poetry data. There is a single poetic text in the Penn-Helsinki Parsed Corpus of Middle English, *The Ormulum*, which I have excluded from my Middle English database on grounds of genre. For an exhaustive discussion of negation in Middle English poetry see Iyeiri (2001). I confine my discussion of Middle English negation to prose texts. Hence I avoid the problems associated with poetic data, particularly the need to abstract away from the poetry those stylistic devices which are particular to the genre. I include discussion of Old English poetry purely because the OE poetic texts are the widely accepted as the earliest extant texts, and have certain peculiarities in their use of negation which deserve examination in the light of work by van Kemenade (2000). However, we will see in chapter 3 that these data need to be interpreted carefully. There are constraints on the poetry which are absent from the prose.

For the purposes of analysing linguistic change, the YCOE texts are subcategorised into three time periods: preceding 950, 950-1050, 1050-1150 according to the manuscript dates given in Ker (1957).¹ The PPCME2 texts are also subdivided into four periods within the corpus: 1150-1250, 1250-1350, 1350-1420, 1420-1500, again by manuscript dates, as given in the PPCME2 documentation. The late ME periods are shorter than the preceding ones. This is due to the availability of more data in LME. I use these time periods to subcategorise the diachronic data throughout the analysis. As long as consistency is maintained in subcategorization, the fact that the LME periods are shorter than the others is of no practical consequence to my argumentation. There is a certain degree of abstraction involved in subdividing the data in this way, which ignores the variation between individual texts noted by Mazzon (2004). Hence I highlight differences between texts where relevant to the analysis, and where it is noticeable that particular texts deviate from the general patterns for a particular period.

¹The manuscript dates do not always reflect the date of composition, which is not always known with certainty for these texts. In the case of later manuscript copies of OE originals, it is unclear to what extent the scribes modernised the language, or preserved the linguistic forms of the original. This complicates the identification of linguistic change in OE. This will need to be borne in mind when I discuss OE data, but is an issue which requires far more attention than I can devote to it here.

These corpora are searched electronically, using *CorpusSearch* (Randall 2000). The size of the available corpora allow much more detailed quantitative analysis than hitherto. The availability of more data make the results more representative of the written language in general, than previous studies which examined a smaller range of texts. However, the data are not evenly distributed within the corpora by date, dialect or genre, so some biases remain to be taken into account. The Middle English period 1250-1350 is particularly problematic. This period is poorly evidenced. The data comprise only three texts, the *Ayenbite of Inwit* localised to Kent, the *Earliest Complete English Prose Psalter* localised to Essex and the *Kentish Sermons* localised to Kent. The majority of material at this period comes from a single text: the *Ayenbite of Inwit*. The majority of data in this period come from Kentish, a dialect which is only marginally represented in the preceding period, and not represented at all in the Late Middle English data. This has the effect of creating a discontinuity between the EME period (1150-1250) and the LME period (1350-1500), which is not wholly a function of time, but in part is an artefact of the uneven distribution of the data between texts and dialects at successive periods.

In addition, biases towards particular sources, whilst reduced are not entirely eliminated. Works by Ælfric are over-represented in the YCOE, and works by Chaucer are over-represented in the late Middle English prose of the PPCME2. Usages or idioms particular to these authors may affect the quantitative analysis. This is an issue which I will return to in the quantitative analysis, examining the usages of these authors separately to test their representativeness when necessary. The corpora contain sufficient data from other sources to control for the usage of these authors.

It is also clear that some differences within the corpora will not be the result of diachronic change, even though they may appear as variation across time periods. The corpora are not homogenous in all other respects such as dialect or genre. Hence caution is required in distinguishing change from variation. Change is only clear when a trend in a particular direction is seen across several time periods.

The YCOE is more homogeneous than the PPCME2. The majority of Old English prose texts come from the West Saxon dialect area, and are religious works. There are some linguistically important exceptions to this which I will discuss. The Middle English period is one of demographic and social change. In particular, the centres of power, learning and text production shift from the West

and South West Midlands to the South East and London areas. This leads to a concomitant change in the dialect and provenance of most written texts in the corpora. This change has as one of its effects the decline of the West Saxon written standard, which was codified and preserved in scriptoria to a much greater extent than any other variety until the emergence of Chancery proto-standard English in the Early Modern English period. Middle English texts show more dialect variation in orthography, lexis, morphology and syntax than most Old English texts. These facts need to be borne in mind when considering evidence for linguistic change in the transition from Old to Middle English.

These social and demographic changes impact on the dialect distribution of texts in the PPCME2. West Midlands texts predominate in Early Middle English, whereas South East and London texts predominate in Late Middle English. Some linguistic differences which might appear at first glance to be due to diachronic change may be attributable to these dialect differences. In addition, the religious subject matter of most of the texts, and their formal or didactic register means that it is impossible to reconstruct variation or change as it actually affected the spoken language of a Middle English speech community. Spoken language is not represented in the PPCME2. It is therefore extremely difficult to relate linguistic changes in the texts to linguistic changes in the speech community. Problems of genre and scribal practices obscure linguistic variability and change and increase the differences between the written and spoken registers. The language of the texts studied does not represent the linguistic patterns prevalent amongst most language users at the time. We only have direct records of the language used by a small socially elite group, who were not only literate in English but also likely to be literate in Latin (and French, following the Norman conquest). Furthermore, we must also recognise that the purpose of the extant texts is largely one of religious edification or instruction and does not reflect the primary use to which language is usually put, namely of communication between individuals on a day to day level. This is particularly pertinent for Old English, although other genres of texts become more common in late Middle English, typically secular literature, myths, legends and secular histories.

Problems of representativeness associated with the Old and Middle English data are compounded by the fact that many vernacular works are translations from Latin originals. Work is only just beginning to establish the linguistic influence which Latin has on Old English translation practices (see Taylor (2005)). This is another area of variation which must be considered when trying to isolate

linguistic change from other types of variation. Achieving this is not straightforward, as it requires knowledge of the language of the particular Latin models used for translation. It is not sufficient to make a generalisation like 'Latin does X therefore Old English does Y'. The provenance and language of the Latin originals may vary, for example according to date of composition, among other factors. Mazzon (2004, 34) observes that Latin generally did not have multiple negation, and suggests that this may affect the frequency of multiple negation in Old English translations from Latin.

The York-Helsinki Parsed Corpus of Old English Poetry poses similar problems to the analysis. It contains only one large scale text *Beowulf* among many smaller samples. As with the prose, there may be variation between texts and dialects as well as variation according to date of composition. The problems are worse for the poetry however, as it is difficult to localize texts to dialect areas, or to assign anything more than approximate dates to them. In dealing with the poetry data, it is also essential to ascertain the extent to which poetic conventions such as metre affect the syntax used in these texts.

However, the York-Helsinki Parsed Corpus of Old English Poetry extends our evidence of Old English back into the eighth century, if the early date argued for *Beowulf* by Fulk (1992) is justified. Van Kemenade (2000) makes a case for using *Beowulf* to represent early Old English, in a comparison with later OE prose. However, the differences in genre, and the constraints on metre and alliteration in *Beowulf* limit the comparability of poetry and prose. In the analysis which follows, I will use *Beowulf* as evidence for Early Old English, whilst noting the problems of this approach (see chapter 3).

2.2.2 Overview of the syntax of Early English

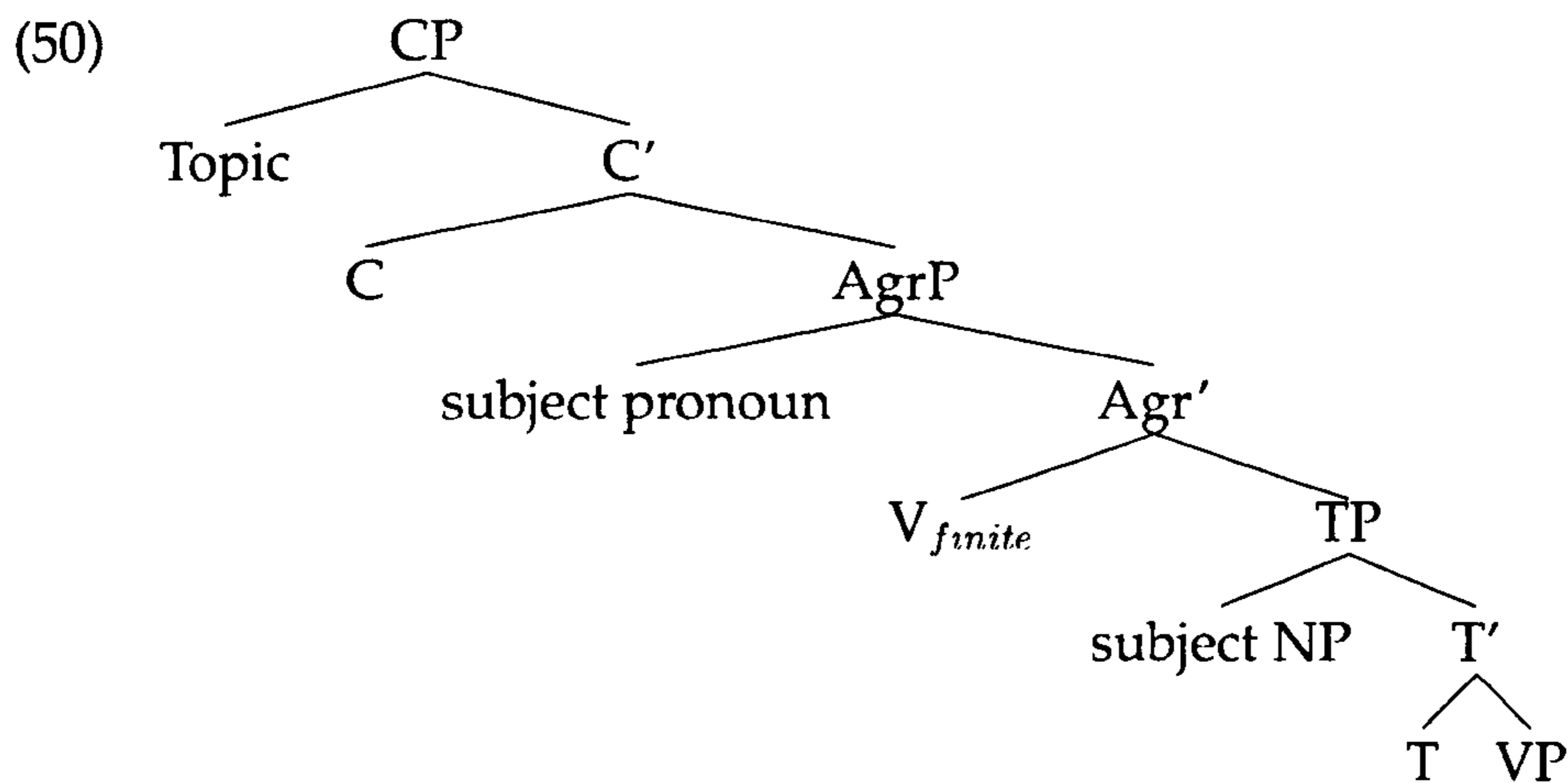
Old and Middle English have attracted considerable attention within the syntactic tradition of Principles and Parameters. Work by van Kemenade (1987) has emphasized the Germanic nature of Old English syntax. Old English looks like an asymmetric verb second language with largely verb-final subordinate clauses. van Kemenade (1987) argues that OE is an SOV language with V to C movement deriving verb-second in main clauses. However, Old English has a set of clitic pronouns which intervene between topic and finite verb, giving rise to verb-third rather than verb second orders.

Pintzuk (1999) established that the syntax of Old English is variable and changing rather than uniform: the headedness of the two verbal projections IP and VP varies. Pintzuk (1999) established that Early English has verb movement to the functional head INFL in both main and subordinate clauses. However, there is variation in the position of the finite verb within the surface string. Pintzuk (1993; 1996; 1999) analyses this as variation and competition in the headedness of IP. Pintzuk (1999) also observes variation in the relative ordering of non-finite verbs and their complements. She adopts the view that there is also variation and competition in the headedness of VP. Old English is therefore both SOV and SVO. This variation in headedness represents two ongoing changes which lead to the loss of head final IP and VP in Early Middle English. I will assume this analysis, and observe some of its implications for the position of *not* in section 2.4.2.

It is well known that in Old English positive declarative main clauses the position of full NP subjects is distinguished from pronoun subjects by the position of the two types of subjects relative to the finite verb. In clauses with non-subject topics, pronouns typically precede the finite verb, giving rise to verb-third orders; whereas full NP subjects typically follow the finite verb. Assuming the finite verb moves to a head initial INFL leaves two options: either there are two distinct subject positions within the INFL complex, or NP subjects remain in VP. The relative positions of NP subjects and VP-adjoined adverbs indicate that NP subjects move out of VP to a position preceding these adverbs, hence most work in this area has concluded that there are two subject positions within INFL. Haeberli (2002a) shows that two subject positions can be distinguished in many Germanic languages by the distinct behaviour of non-topic pronominal and full NP subjects relative to TP-adjuncts. Pronoun subjects precede TP-adjuncts. Whilst the position of full NP subjects is more variable, these typically follow TP adjuncts. Hence there is a structural difference between the positions of these two types of subjects, and two subject positions outside VP.

In later work, van Kemenade (1999; 2000) takes the view that there is an extra functional projection within IP whose specifier hosts pronominal subjects and objects. This is the view taken by Haeberli (2002b) whose analysis I will adopt here. Haeberli labels the two positions AgrP and TP, following Bobaljik and Thrainsson (1998) who correlate the presence of AgrP with agreement morphology on the finite verb.² The resulting Old English clause structure is shown in (50).

²Spec,AgrP is a position for pronominal arguments in OE, both subjects and objects.



In positive declarative main clauses, the verb moves to Agr⁰, following pronoun subjects, even in clauses with non-subject topics. However, it is well known that certain OE and ME clauses show inversion of the finite verb with a subject pronoun (Pintzuk 1996; 1999, Kroch and Taylor 1997, Hulk and van Kemenade 1997). Pintzuk (1996; 1999) lists the following clause types:

1. Direct questions:

- (51) hwi sceole we oþres mannes niman
 why should we another man's take
 'Why should we take those of another man?'
 (AELS 24.188, Pintzuk (1999, 90, ex 111))

2. Verb initial declarative clauses, such as subjunctives (52) and imperative (53) clauses, but also some declaratives (54) with so called 'narrative inversion'.

- (52) sie he mid stanum ofworpod
 be he with stones slain
 '...he should be slain with stones...'
 (Laws Af El 21 34.1, Pintzuk (1999, 91, ex. 113))

- (53) beo þu on ofeste
 be you in haste
 'Be quick.'
 (Beo 386, Pintzuk (1996, 243, ex. 47))

- (54) hæfdon hi hiora onfangen
 had they them sponsored
 'they had sponsored them'
 (ChronA 86.28-29 (894), Pintzuk (1996, 242, ex. 46))

3. Clauses with certain adverbs in initial position (55, 56, 57).

- (55) þa gemette he sceaðan
 then met he robbers
 'then he met robbers'
 (AELS 31.151, Pintzuk (1996, 243, ex. 48))
- (56) þonne magon ge þær eardungstowe habban
 then may you there dwelling-place have
 'then you may have a dwelling-place there'
 (Bede 28.15, Pintzuk (1999, 91, ex.117))
- (57) nu cwæð ic on minum mode þæt...
 now said I in my mind that...
 'Now I said in my mind that...'
 (AELS 24.94, Pintzuk (1999, 91, ex.118))

4. Clauses with a negated verb

- (58) ne mihton hi nænigne fultum æt him begitan
 NEG could they no help from him get
 '...they couldn't get any help from him...'
 (Bede 48.9-10, Pintzuk (1999, 91, ex.114))

These clauses with inversion are often grouped together (van Kemenade 1987, Pintzuk 1999). However, it is not clear that they behave as a group with respect to diachronic change. Pintzuk (1999, 91) observes that the Early OE poem *Beowulf* does not show inversion following adverbs *þa*, *þonne*. Van Kemenade (2000) observes that there are also negative initial clauses without verb movement to C⁰ in *Beowulf* (see chapter 3 for discussion).

Second, some but not all of these types of inversion survive into PDE. Inversion survives in questions (59), and some conditional or modal contexts (60), although it is my impression that the inversion in (60) is marginal or archaic in PDE.

- (59) Did you see that?
- (60) Had I not been thinking clearly, the situation might have turned out very differently

It also survives following some adverbs (61), although the set of adverbs which give rise to inversion is not the same as in Old English.

- (61) a. Seldom have I been so embarrassed
 b. Never have I seen such a thing

There is another set of contexts for inversion in Present-Day English whose history is unclear. These are discussed by Haegeman (2001), who analyses inversion as a focalization strategy. These contexts include monotone decreasing quantifiers, including negation. The set of inversion contexts overlaps with the set of contexts which license negative polarity items in PDE. Further work needs to be done to investigate the history of inversion in these contexts. Chapter 3 will address the diachrony of inversion in negative clauses.

The syntax of subordinate clauses differs from the syntax of main clauses in important respects. Topicalisation is generally not available in subordinate clauses, except in the complements of 'bridge verbs' which allow CP recursion. There are no asymmetries between the position of pronoun and NP subjects relative to finite verbs, unlike in main clauses. Both pronoun and full NP subjects generally precede the finite verb, although see section 2.4.4 for some exceptional contexts in which full NP subjects appear lower than the finite verb. Haeblerli (2001) accounts for these differences between main and subordinate clauses by proposing a lower head (T^0) as the target of verb movement in subordinate clauses. Main clauses have verb movement to the higher head Agr^0 . On the basis of this evidence, I will assume a split INFL with $AgrP$ dominating TP . It is conceivable in a more articulated functional structure that there are more positions than these two, such as $M(odal)P$, $Asp(ect)P$. I do not assume the existence of functional projections in early English unless they are empirically well motivated (see chapter 4 for a discussion of $NegP$ in this connection). I do not assume that articulated functional structures, such as those proposed by Cinque (1999), are universally present in all clauses, as Cinque proposes. I assume the existence of functional projections only when they are either lexicalised, or motivated by their syntactic effects. Like Bobaljik and Thrainsson (1998), I take the existence of certain functional projections to be a matter of parametric variation. There are two types of functional projection: those which are subject to parametric variation and those which are not. I assume that the 'core functional categories' identified by Chomsky (2000) are not subject to parametric variation, because of the semantic contribution they make to every clause. These include C , which encodes information about the proposition, T which anchors the proposition in time, and v which marks transitivity and aspect. The question of whether a functional projection representing negation or polarity should be added to the hierarchy of functional

projections is considered in detail in chapter 4. There, I show how the idea that functional projections are parametrised affects the representation of negation.

2.3 An inventory of sentential negators in early English

As a preliminary to the discussion of Jespersen's Cycle in English, it is necessary to distinguish at least four types of negative marker in Old and Middle English on syntactic grounds: the sentential negator *ne* (62), the sentential negator *not* (63), negative arguments (64) and negative adjuncts (65).

- (62) we *ne* moten halden Moses e lichamlice
 we NEG might observe Moses' law bodily
 'we might not observe Moses law literally'
 (CMLAMBX1,89.735)
- (63) Thou shalt *not* do so
 You ought not do so
 'You ought not do so'
 (CMROLLTR,41.855)
- (64) He left *noþing* of his lyf þat was worthi to be writin
 He left nothing of his life that was worthy to be written
 'He left nothing of his life that was worthy to be written'
 (CMCAPCHR,59.831)
- (65) I schal *neuere* ceese fro wepyngge
 I shall never cease from weeping
 'I shall never cease from weeping'
 (CMAELR,50.776)

Whilst there is a clear distinction between *ne* and the others, a distinction between *not* and negative adjuncts is not so clearly marked by differences in their syntactic distribution. Sections 2.4.2-2.5 will address some of the criteria which have been proposed to distinguish sentential negators and negative adjuncts.

ne is distinct from all other negative forms because of its near-categorical adjacency to the finite verb (see section 2.3.1.1), which marks it out as a head in Principles and Parameters terms. Other Old and Middle English negative forms show the properties of phrases or maximal projections: they are syntactically independent of other elements, unaffected by head movement processes. Instead,

they occupy phrasal positions. Two groups of negative phrases can be distinguished: negative arguments, which are assigned a θ -role within vP, and negative adjuncts, which do not receive a θ -role, and occupy a range of adjoined positions. I will postpone discussion of negative arguments until chapter 5, and concentrate on the syntax of *ne* and the negative adverbials in the present chapter.

Cross-linguistic analyses of negation such as Haegeman (1995) and Zanuttini (1997) make a distinction between negative adverbs and a class of sentential negators. The distinction corresponds to a semantic distinction between negative adjuncts which consist of negation plus a restriction on the negation: *never* = $\neg\exists x$ (x =time); and semantically impoverished negative adjuncts which express negation without a restriction, such as Present Day English *not*: *not* = $\neg\exists$. For Haegeman (1995) and others, the distinction has a correlate in syntactic structure. Whilst negative adverbs are merged as adjuncts of vP or TP, sentential negators are merged in a structurally higher position as the specifiers of a distinct functional projection NegP associated solely with negation. Both Roberts and Roussou (2003) and van Kemenade (2000) link the semantic impoverishment of negative adjuncts with their structural reanalysis as NegP elements. This reanalysis has a structural correlate in that negators are merged in a higher structural position than formerly. Roberts and Roussou (2003) identify this as one of the properties of grammaticalisation. This makes an interesting empirical prediction, although one which might prove difficult to test: the position of negative adjuncts will change as they are reanalysed as sentential negators.

Distinguishing sentential negators such as *not* from negative adjuncts such as *never* is by far the most difficult task facing an empirical description of early English negation. I will devote most of this chapter to exploring bases to distinguish sentential negators and negative adjuncts. First, however, I will make some remarks concerning the distribution of *ne*, which identify *ne* as a head or clitic element.

2.3.1 Negative heads

2.3.1.1 Old and Middle English *ne*

In the majority of instances, *ne* is left-adjacent to the finite verb, and positionally co-variant with it (Tables 2.2 and 2.2). *ne* is adjacent to the finite verb whether the finite verb is in Agr (66, 67), in T (68,69), or in C (70, 71), and irrespective of the headedness of AgrP or TP. (Pintzuk 1999). Examples of I-medial and I-final main

clauses are shown in (66) and (67). (68) is an example of an I-medial subordinate clause, (69) an example of an I-final subordinate clause.

- (66) ic ne mæg hit nu swa hraðe asingan
I NEG can it now so quickly sing
'I cannot sing it so quickly now'
(coboeth,Bo:39.127.29.2536)
- (67) ic geseon ne mæg
I see NEG can
'I cannot see'
(coelive,+ALS_[Swithun]:204.4357)
- (68) Gif þu nelle me ofslean, asend me to þam casere...
If you NEG-intend me to-kill, send me to the emperor...
'If you do not intend to kill me, send me to the emperor...'
(coelive,+ALS_[Julian_and_Basilissa]:207.1066)
- (69) þæt he deap þrowigan ne scile
that he death endure NEG shall
'that he shall not endure death'
(coverhom,HomS_24_[ScraggVerc_1]:115.121)
- (70) þonne ne mæg he noht geseon
then NEG can he nothing see
'then he can see nothing'
(cocura,CP:11.69.17.448)
- (71) Ne brohte we nan þing to þysum middanearde
NEG brought we no thing to this world
'We did not bring anything to this world'
(cocathom1,+ACHom_I,_18.323.188.3595)

The best way to account for this range of positions for *ne* and its close association with the finite verb is to analyse *ne* as a morphological affix on the finite verb. This situation obtains throughout Old and Middle English.

Clause	<i>ne</i> adjacent to Vf	<i>ne</i> elsewhere	TOTAL	% adjacent to Vf
Main	7492	12	7504	99.8%
Subordinate	7988	7	7995	99.9%

Table 2.1: The distribution of *ne* relative to the finite verb in the YCOE.

Clause	<i>ne</i> adjacent to Vf	<i>ne</i> elsewhere	TOTAL	% adjacent to Vf
Main	1885	4	1889	99.8%
Subordinate	2059	18	2077	99.1%

Table 2.2: The distribution of *ne* relative to the finite verb in the PPCME2.

There is one small group of systematic exceptions in Old English. These exceptions take the form of *uton* - *ne* + *V* (n=5). These are examples where *ne* and the finite verb are non-adjacent.

- (72) a. *Uton ne agildan yfel ongean his god*
 Let NEG repay evil against his good
 'Let us not repay his good with evil'
 (coverhom,HomM_13_[ScraggVerc_21]:98.2710)
- b. *uton ne forlætan gyet ðas boc*
 Let NEG abandon yet the book
 'Let us not abandon the book yet'
 (cosolilo,Solil_1:50.14.645)
- c. *hie sceolon ne underfon ða are þæs lariowdomes*
 they ought NEG take the property the-GEN authorities-GEN
 'they ought not take the property of the ecclesiastical authorities'
 (cocura,CPHead:9.2.3)

These Old English examples are very marginal.³ The important fact here seems to be the relative scope of the modal (*uton*, 'let') and the negation, which is reflected in the surface order of the modal and *ne*. There are no examples of *uton* with preceding *ne*. The analysis of pre-modal verbs by Roberts and Rousou (2003) postulates a biclausal structure. So, *uton* selects a TP complement, in a similar way to a raising verb. *ne* is plausibly associated with the lower verb with which it is adjacent rather than the higher verb. Given this analysis, these few instances of *ne*, which at first sight constitute the only evidence for *ne* as a non-affixal element, independent of the finite verb in surface structure are not unequivocal evidence of non-affixal *ne*.

There are some similar Middle English examples (73) (n=3), all in Margery Kempe), in which a pre-modal or subjunctive verb takes a verb prefixed by *ne* as its complement. A similar analysis might be extended to these examples.

³They appear in only three texts: the *Vercelli Homilies*, the OE *Soliloquies*, and the OE version of Gregory's *Pastoral Care*.

- (73) mor þan sche xuld haue ellys had, had her euyl langage ne ben
 more than she should have else had, had her evil language NEG been
 'more than she should have had otherwise, if her evil language had not
 been'
 (CMKEMPE,43.957)

A second systematic use of *ne* independent of a finite verb emerges in Middle English (n=6), particularly in the works of *Wycliffe* (n=5/6). In subordinate clauses, a non-assertive complementiser *þat ne* is used (74). In this construction, *ne* does not introduce negation, rather it marks non-assertive polarity in the complement clause. I will discuss this use of *ne* in more detail in chapter 4.

- (74) and hit is no dowte þat ne syche men ben prophetys
 and it is no doubt that ne such men are prophets
 'and there is no doubt that such men are prophets'
 (CMWYCSER,252.513)

Tables 2.1 and 2.2 show that the vast majority of instances of *ne* appear adjacent to a finite verb throughout Old and Middle English. However, there are some very robust differences between the Old and Middle English usage of *ne*. First, the position of *ne* in main clauses differs in Old and Middle English. In the majority of Old English main clauses with *ne*, *ne* is the initial element (n=1578/2304 or 68% have initial *ne*). Initial *ne* is always accompanied by inversion of the finite verb and a subject, whether the subject is a full NP or a pronoun. In this respect, clauses with initial *ne* differ from other main clauses. In most main clauses with initial non-subject elements, the finite verb will invert with an NP subject in spec,TP, but will not invert with a subject pronoun in spec,AgrP. Recall that under Haeberli's analysis, the typical position of the finite verb in main clauses is Agr⁰, and follows a subject pronoun (50). Thus, inversion of a finite verb and a subject pronoun is typically taken to reflect verb movement to a position higher than the subject pronoun, and higher than the typical landing site of verb movement in clauses without initial *ne*. Both Pintzuk (1999) and Haeberli (2002b) analyse inversion of the finite verb and a subject pronoun as movement of the finite verb to C⁰. Questions concerning the syntactic status of *ne* in inverted and uninverted contexts, and the syntactic derivation of inversion itself will be discussed at length in chapter 3.

Second, in Old English and Early Middle English, *ne* is present in the majority of negative clauses, and co-occurs with negative arguments (75) and adjuncts

(76), as well as the secondary negator *not* (77). In Late Middle English, the overall frequency of *ne* declines.

(75) And certes rightfully *ne* mowe ye take no vengeance...
 And indeed rightfully NEG must you take no vengeance...
 'And indeed, rightfully, you must not take vengeance'
 (CMCTMELI,228.C2.453)

(76) *ne* scalt ðu næure habban god
 NEG ought you never have benefit
 'You ought never have benefit'
 (CMVICES1,45.508)

(77) ac of hem *ne* speke ic noht
 but of them NEG spoke I not
 'but I did not speak of them'
 (CMTRINIT,95.1272)

Third, the frequency of clauses which are negated by the negator *ne* alone decreases during Middle English.

These three issues will be addressed in subsequent chapters using tools of both syntactic and quantitative analysis. The syntactic analysis will focus on the syntactic representation of negation in feature and phrase structure terms, and representation of the syntactic dependencies between *ne* and the other negatives with which it co-occurs.

2.3.1.2 Evidence for *not* as a head in LME

In Late Middle and Early Modern English, some examples with *not* emerge in which the distribution of *not* parallels the distribution of *ne* in earlier English. Risänen (1994; 1999) notes some examples where *not* inverts with subject pronouns, along with the finite verb in Early Modern English questions. Van Kemenade (2000) takes these examples (78) as indicating positional co-variance of *not* and the finite verb, which we have already seen is an argument for treating a negator as a verbal affix. Crucially, the use of *not* as a verbal affix is not possible when *ne* is present. This use of *not* is in complementary distribution with *ne*.

(78) dyd not I send unto yow one Mowntayne that was both a traytor and a
 Did not I send to you one Montagne who was both a traitor and a
 herytyke...?
 heretic...?

'Didn't I send to you one Montayne who was both a traitor and a heretic?'
(Mowntayne 210, (van Kemenade 2000, ex.25))

These examples show *not* moving to C^0 along with the finite verb in questions. The fact that *not* moves under head movement identifies it as a head element or clitic. Van Kemenade takes this as evidence that *not* is becoming a clitic head affixed to the finite verb at this period. According to van Kemenade (2000, 70), the crucial factor in this reanalysis of *not* from adverbial to head element is the loss of the negative head *ne*.

In the PPCME2 data, such examples are particularly rare even in the period 1430-1500 (n=6/94, 6%). These correspond well to the figures which Rissanen (1999) gives of the frequency of the order *not*-subject pronoun in ME (n=5/109 or 5%). If the emergence of *not* in a new position is evidence for a change in its status, the new structural option is hardly productive in Middle English.

2.3.2 Negative arguments and adjuncts

Unlike Present Day Standard English, Old and Middle English typically exhibit multiple negation. A clause can involve two or more markers of negation, yet the whole clause will still be interpreted as negative. This contrasts with the Present Day Standard English situation in which each negative marker contributes a negative interpretation to the clause. Therefore, in PDE, two or more negatives in a single clause will cancel each other out. In Old and Middle English, two or more negatives will not cancel each other out, but the clause which contains two or more negatives will be interpreted at the clause level as a single instance of sentential negation. I will distinguish two types of multiple negation. As well as co-occurring with *ne*, negative arguments and adjuncts can co-occur with each other. Clauses which exhibit multiple negation between *ne* and one negative argument or adjunct (75, 76) I will label examples of NEGATIVE DOUBLING (following van der Wouden (1994)). Clauses which exhibit multiple negation between negative arguments and/or adjuncts, in the absence of *ne* (79) I will label examples of NEGATIVE SPREAD (again following van der Wouden (1994)). Throughout Old English and Early Middle English negative doubling and negative spread co-occur (80).

- (79) a. For or now, I found never no knyght that matched me
 For before now, I found never no knight who matched me

'for before now, I never found any knight who matched me.'
(CMMALORY,68.2331)

b. 3e had neuyr no knowlach of me be-fore þis time
you had never no knowledge of me before this time'
'You never had any knowledge of me before this time.'
(CMKEMPE,58.1293)

c. no man seyð no-thyng a-geyns hem
no man said nothing against him
'no man said anything against him'
(CMKEMPE,33.730)

(80) a. nan mann næfð swapeah nane mihte þurh hine sylfne
no man NEG-has however no strength through him self
'however, no man has any strength of himself'
(coaelhom,+AHom_22:672.3699)

b. Ne deð nan man nan þing on diglum
NEG does no man no thing in secret
'No man does anything in secret'
(cowsgosp,Jn_[WsCp]:7.4.6259)

c. nan cristen man ne sceal þæt gelyfan
no Christian man NEG ought that believe
'no Christan man ought believe that'
(cocathom1,+ACHom_I,_20:340.145.3982)

Multiple negation of the negative doubling type will be distinguished from the bipartite form of sentential negation (*ne...not*) which emerges at stage two of Jespersen's Cycle. Negative doubling holds between *ne* and a negative argument or adjunct. *not* in the bipartite negation (*ne...not*) has been distinguished from negative adjuncts in previous accounts of Jespersen's Cycle on the basis that *not* is a semantically bleached functional element, which conveys negation without a restriction, unlike negative adjuncts or arguments which consist of negation plus a restriction on the negation (Roberts and Roussou 2003). The remainder of this chapter will be concerned with establishing distributional correlates for the functional distinction between negative adjuncts and the sentential negator *not*.

2.4 Adverbial negative elements

This section discusses the status of two negative adverbial elements in Old and Middle English: Middle English *not* and Old English *na*. Both these elements have been analysed as sentential negators, and distinguished from other negative adverbials such as *næfre* 'never'. Two sets of diagnostics have been put forward for this view. First, semantic diagnostics. Sentential negators have purely functional meaning, unlike negative adverbs which consist of negation, plus a restriction on the negation, and hence retain some lexical meaning. Second, distributional diagnostics have been used to distinguish adverbial negatives from sentential negators, on the grounds that sentential negators occupy a fixed position in the functional structure of the clause (spec,NegP), unlike other negative adjuncts.

2.4.1 Research questions concerning the distribution of *na* and *not* early English

Any discussion of the distribution of *na* and *not* in early English must first establish the position of these elements within clausal structure. This is not entirely straightforward, and has been an area of debate in the literature. Van Kemenade (1999, 2000) claims the position of OE *na* and EME *not* is high, whilst Haeberli and Ingham (2003) claim that the position of EME *not* is low. On a superficial level, we might therefore conclude that the position of secondary negators changes in early English. However, I will examine the evidence underpinning these two positions, showing that once variability in the positioning of subjects is taken into account, the evidence for a low position for *na* and *not* is much more robust than the evidence for the high position. Van Kemenade (2000, 72) claims that the low position for negation emerges during Middle English. I will present data from both main and subordinate clauses to show that this is not the case.

We are left with the problem of distinguishing negative adverbs and sentential negators. The distinction between negative adjuncts and sentential negators is important to the discussion of early English for several reasons. The sentential negator *not* is thought to develop out of the negative adjunct *nawiht* in Old or Middle English (Jack 1978b). Frisch (1997) argues that there is empirical evidence for this development in the Early Middle English period (c.1150-1350). Evidence for this development will be examined. A thorough investigation of what consti-

tutes evidence to distinguish the adjunct *not* from the sentential negator *not* will be a necessary part of this discussion. In contrast to Frisch (1997), Haeberli and Ingham (2003) argue that Early Middle English *not* is a sentential negator distinct from adjoined adverbs. I will examine the distributional evidence on which both Frisch (1997) and Haeberli and Ingham (2003) base their conclusions. I will claim that the positional evidence to distinguish *not* from adverbs is less clear than Frisch (1997) and Haeberli and Ingham (2003) propose.

The distributional evidence to distinguish adverbs and sentential negators falls into three parts. First is the position of sentential negators relative to subjects. Van Kemenade (1999, 2000) claims that there is a fixed position for *na* and *not* following pronominal subjects but preceding full NP subjects. Haeberli and Ingham (2003) take issue with van Kemenade's claims. Instead, they claim that Early Middle English *not* predominantly follows full NP subjects. Second is the position of *not* and adverbs relative to the finite verb. This is the basis on which Frisch (1997) identifies adverb *not*. He claims that all *not* preceding the finite verb are adverbs rather than sentential negators. However, his analysis is incompatible with the syntactic assumptions I adopt, and his conclusions do not follow when we consider the effect of variation in the headedness of INFL (Pintzuk 1999) on the relative positions of *not* and the finite verb.

Third, van Kemenade (2000) and Haeberli and Ingham (2003) consider the distribution of *not* in relation to the positions of pronominal and nominal objects. Haeberli and Ingham (2003) argue that the distribution of *not* differs from the distribution of adverbs relative to objects. On this basis, they distinguish sentential negator *not* from adverbs. I argue that the behaviour of *not* is not unique, but typifies a subset of adverbs. The position of *not* relative to objects does not uniquely distinguish *not* from all adverbs. This chapter will re-examine the evidence for the distinction between sentential negator *not* and adverbs taking data not just from Early Middle English as Haeberli and Ingham (2003) do, but throughout the Middle English period, taking account of differences in the distribution of *not* at different periods.

Diagnostics for distinguishing sentential negators and adverbs are particularly important to the discussion of *na*. Van Kemenade (1999, 2000) has argued for an early distinction between negative adjuncts and *na*, which she claims is a sentential negator in the Old English period 950-1150. Her analysis places the emergence of a phrasal sentential negator much earlier than previously supposed, for example by Jack (1978b). Others, notably van Bergen (2003) and Ingham (2005)

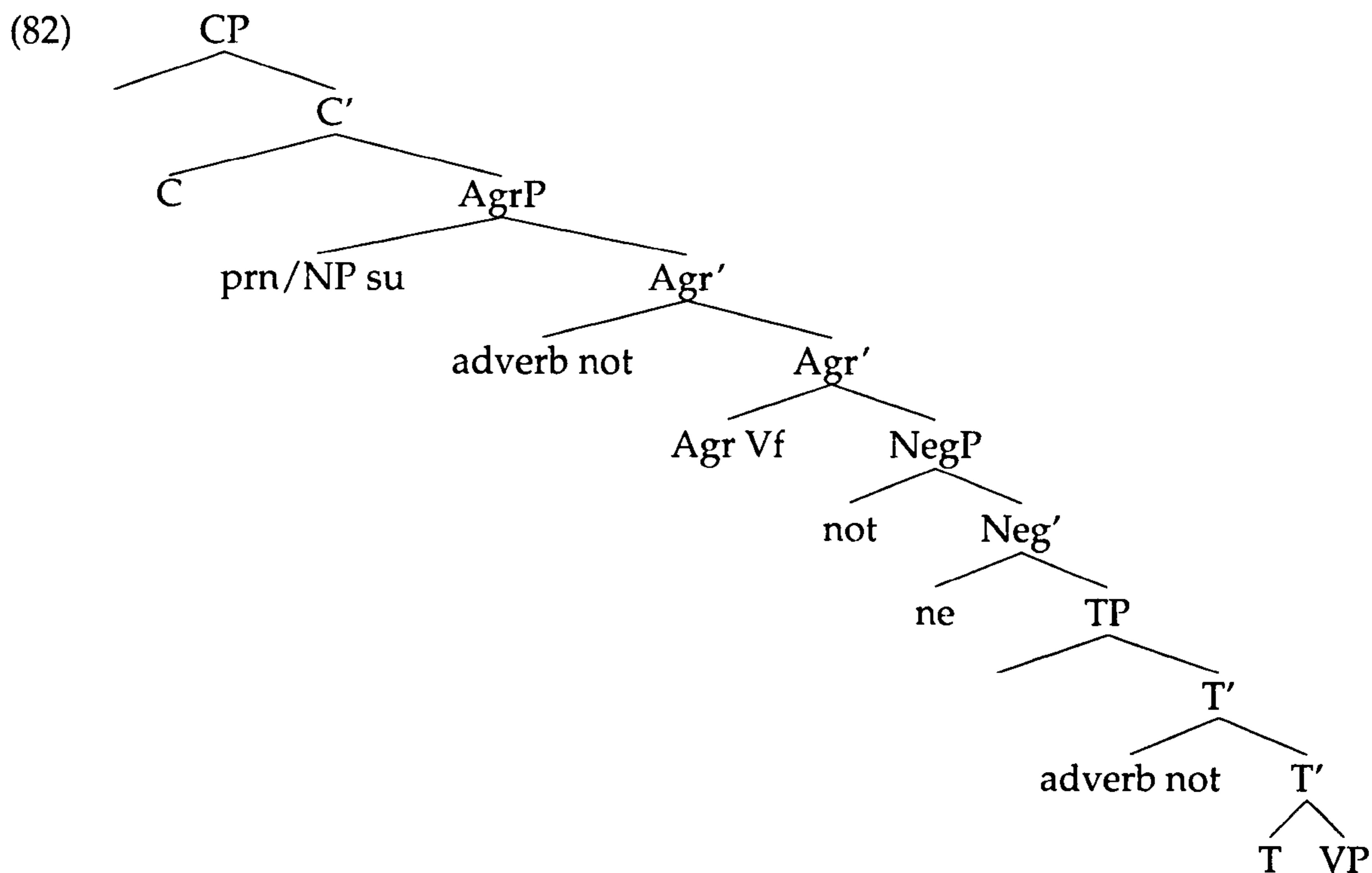
express scepticism about analysing Old English *na* as a sentential negator. In section 2.4.5, I will examine in detail the evidence van Kemenade adduces for this conclusion, in relation to the distributional evidence for the sentential negator *not*. The status of *na* has important implications for the description and analysis of Jespersen's Cycle in English, as I will show in subsequent chapters.

2.4.2 Frisch's (1997) diagnostics for adverb *not*

Frisch (1997) includes *not* within the category of negative adverbs in Early Middle English, whereas Haeberli and Ingham (2003) argue that *not* differs from adverbs, even in the Early Middle English period. Frisch discusses the position of *not* in relation to the position of the finite verb. He claims that instances of *not* preceding the finite verb (81) are adverbial uses of *not* rather than the sentential negator *not*.

- (81) a. naht ne scealt tu libben
 not NEG shall you live
 'you shall not live'
 (CMVICES1,147.1833)
- b. he hit naht ne wite
 he it not NEG knew
 'he did not know it'
 (CMTRINIT,79.1073)

Frisch's claim rests on some assumptions which I do not share. The clause structure he assumes is shown in (82).



Frisch's account postulates a functional projection NegP with its specifier as the fixed position for the sentential negator *not*. The landing site of the finite verb is Agr⁰, which dominates the functional projection NegP. Sentential negators in spec,NegP are structurally lower than the finite verb, hence postverbal. This distinguishes sentential negators from adverbs which Frisch allows to adjoin to Agr', higher than the landing site of the finite verb (Agr⁰). This derives preverbal adverbs, including pre-verbal *not*. In calculating the frequency of adverb *not*, Frisch assumes that adverbial *not* occupy both pre- and post-verbal positions (Agr'-adjunction and T'-adjunction), in the same way as other adjoined adverbs. Frisch uses the distribution of *never* across pre- and post-verbal positions to gain an independent estimate of the frequency of Agr'-adjunction. In all ME periods, 16% of instances of *never* are pre-verbal. On this basis, he claims that the preverbal (Agr'-adjoined) instances of *not* only represent 16% of the total instances of adverb *not*. He compares the distribution of *not* with *never*, concluding that, in periods when the pre-verbal occurrence of *not* is 16% of the total, all *not* are adjoined adverbs syntactically the same as *never*. When the frequency of pre-verbal *not* is lower than 16%, Frisch takes this to indicate that some *not* are sentential negators which cannot appear in a pre-verbal position.

There are two problems with Frisch's approach. First, Frisch assumes the landing site of the finite verb is the same in main and subordinate clauses. Fol-

lowing Haerberli (2001; 2002b), I assume a landing site of Agr⁰ for the verb in main clauses and T⁰ in subordinate clauses. If the position for NegP is high as Frisch assumes, then any failure of T to Agr movement will result in pre-verbal *not*. Haerberli (2002b; 2001) argues that verb movement targets Agr⁰ in main clauses, and T⁰ in subordinate clauses. Therefore, under Frisch's clause structure all *not* should be pre-verbal in subordinate clauses. This is clearly not the case (83), and indicates a lower position for *not* than the one Frisch (1997) proposes.

- (83) ʒif fleshly disciples undirstonde þis not
 if fleshly disciples understand this not
 'if mortal disciples do not understand this'
 (CMWYCSER,392.2995)

In fact, the distribution of *not* in relation to subjects (discussed in section 2.4.4) indicates that the position of *not* is always low in subordinate clauses. We can rule out the high *not* position in subordinate clauses. The evidence from *not* placement relative to subjects indicates that there is no high position for *not* in subordinate clauses. Hence, a reappraisal of the position of *not* in subordinate clauses is needed. Post-verbal *not* must be dominated by T⁰ in subordinate clauses. The position of *not* is lower than Frisch supposes, at least in subordinate clauses, presumably between T and V. The relative ordering of *not* and the finite verb does not distinguish the two positions for *not* in main clauses as both high and low positions are dominated by Agr⁰, therefore post-verbal.

Second, Frisch assumes that the linear order of finite verb and sentential negator *not* must be constant, ignoring strong evidence for variation in the position of the finite verb, the different landing sites of verb movement in main and subordinate clauses, and variation in the headedness of INFL which Kroch and Taylor (2000b) describe for EME. There are two relevant axes of variation in the position of the finite verb: variation in the linear order of finite verb and *not* because of variation of the headedness of INFL (Pintzuk 1999, Kroch and Taylor 2000b), and variation in the application of V to Agr or V to T movement.

Variation in the headedness of INFL is one plausible approach to derive Early Middle English pre-verbal *not*. Pintzuk (1993; 1996; 1999) argues for variation in the headedness of INFL in Old English, on several syntactic grounds, principally the existence of word orders which cannot be derived by movement operations. Kroch and Taylor (2000b) extend Pintzuk's analysis to Early Middle English. They provide evidence that variation in the headedness of INFL still occurs in early Middle English, albeit that I-final orders are much rarer in Middle

English than Old English. I follow Pintzuk, Kroch and Taylor in assuming variation in the headedness of INFL in Old and Middle English. This has the effect that the relative positions of *not* and the finite verb will vary in the surface string whilst the finite verb will always dominate negation.

However, it is not clear that the frequency of I-final order is sufficient to account for the frequency of pre-verbal *not*. Kroch and Taylor (2000b) claim that INFL-final order becomes marginal in Early Middle English. They give a figure of 9.6% superficial or surface I-final orders in PPCME2 subordinate clause data for the period 1150-1250.⁴ Pintzuk (1996; 1999) shows that the frequency of I-final orders is higher in Old English subordinate clauses than in Old English main clauses. Given the persistence of this contextual conditioning throughout the Old English data, there is every reason to suppose that clause type has a similar effect on the frequency of I-final order in Early Middle English. Therefore, I will consider the frequency of pre-verbal *not* in main and subordinate clauses separately.

Period	Main clauses			Subordinate clauses		
	pre-V <i>not</i>	Total <i>not</i>	% pre-V	pre-V <i>not</i>	Total <i>not</i>	% pre-V
1150-1250	0	133	0%	34	165	20.6%
1250-1350	3	173	1.7%	7	166	4.2%
1350-1420	1	336	0.3%	4	1117	0.4%
1420-1500	0	347	0%	5	914	0.5%

Table 2.3: The frequency of pre-verbal *not* in subordinate clauses and non-conjoined main clauses.

Table 2.3 shows the frequency of pre-verbal *not* in main and subordinate clauses. For the period 1150-1250, the lack of pre-verbal *not* in main clauses is consistent with the marginal frequency of I-final orders in main clauses.⁵ However, the fre-

⁴This is their upper estimate for subordinate clauses. They claim that clauses which are unambiguously I-final are much less frequent. Their estimates range from 1.8% to 4.1%.

⁵For the period 1250-1350, there are three examples in the *Ayenbite of Inwit* which are problematic. These are main clauses with pre-verbal *not* like (i) (n=3/45 or 7%).

- (i) þe oþer naȝt him awreċþ þeruore (CMAYENBI,115.2209)
 the other not him strike therefore
 'therefore the other does not strike him'

They may be a consequence of I-final orders, but this would require an anomalously high frequency of I-final clauses in this text. These may constitute uses of *not* as adjoined adverbs, but

quency of pre-verbal *not* in subordinate clauses is too high to be a consequence of I-final orders alone. In the period 1150-1250, Kroch & Taylor's (2000) highest estimate for surface I-final orders in subordinate clauses is 9.6%. Overall, the frequency of pre-verbal *not* in subordinate clauses is double that at 20.6%.⁶

Kroch and Taylor (2000b) give good reasons to suppose that the actual frequency of I-final order is lower than the superficial or surface frequency of I-final orders. They claim that another analysis is available to derive surface I-final orders in clauses with subject gaps or subject pronouns. This is stylistic fronting (Maling 1990). Stylistic fronting is a process by which non-subject material is fronted to spec,TP in those clauses where spec,TP is not itself occupied by the subject. In Middle English, stylistic fronting is available in clauses with subject gaps, and arguably also in clauses with subject pronouns (Kroch and Taylor 2000b), which under Haerberli's analysis are clitics in spec,AgrP. Once Kroch and Taylor disregard clauses with subject pronouns or subject gaps, their estimates for I-final frequency in EME subordinate clauses range from 1.8% to 4.1%

Stylistic fronting is relevant for the distribution of *not* because Maling (1990) claims that the sentential negator is one of the elements most affected by the fronting process. Instead of standing in spec,NegP *not* can be fronted to spec,TP when spec,TP is vacant (84), (85). Under the assumption that subordinate clauses only have V to T movement, this will result in pre-verbal *not* (84, 85). In main clauses, stylistic fronting to spec,TP will not result in pre-verbal *not* because the finite verb is in a higher position (Agr⁰). Only in subordinate clauses does stylistic fronting result in pre-verbal *not*. Therefore, a full account of the distribution of pre-verbal *not* needs to take account of different subject types and different clause types. The subordinate clause data are shown in Table 2.4.

(84) þt God fordemð þa mænn for þa þinge þe naht nis
that God condemns the man for the thing [that not NEG-is]
'that God condemns the man for the thing [which is not]'
(CMKENTHO,140.158)

(85) hu mei he luuian wel ure drihten þe he naut ne isihð
how can he love well out Lord [who he not NEG sees]
'how may he love our Lord well, [though he cannot see him]'

their analysis as adverbs or sentential negators is not clear, given variability in the other means of deriving pre-verbal *not*.

⁶Recall that Kroch and Taylor (2000b) use the same database that I use here, so our results are directly comparable.

(CMLAMBX1,125.1247)

Period	NP subject			Pronoun subject			Subject gap		
	pre-V	Total	%	pre-V	Total	%	pre-V	Total	%
1150-1250	2	23	9%	18	92	20%	14	50	28%
1250-1350	0	23	0%	1	73	1%	6	70	9%
1350-1420	0	313	0%	4	538	1%	0	266	0%
1420-1500	2	162	1%	0	574	0%	3	178	2%
Total	4	521	1%	23	1277	2%	23	564	4%

Table 2.4: The frequency of pre-verbal *not* in subordinate clauses according to subject type.

Table 2.4 subdivides the subordinate clause data according to subject type. There are only two examples of pre-verbal *not* in clauses with NP subjects in the period 1150-1250, and these are the only examples until Late Middle English (see below for discussion of these). It is plausible to analyse both EME clauses as examples of I-final clauses. The frequency of pre-verbal *not* in clauses with subject gaps or subject pronouns is much higher, as predicted under an analysis which makes available stylistic fronting. These data support the idea that some EME texts had stylistic fronting. The possibility of stylistic fronting in clauses with subject gaps or subject pronouns must be considered a potential derivation of pre-verbal *not* in subordinate clauses until at least 1350. The evidence of Table 2.4 indicates stylistic fronting is less frequent after 1150, but there is still a higher incidence of pre-verbal *not* in clauses with subject gaps until 1350.

The combined effect of variation in the headedness of INFL and the existence of stylistic fronting means that Frisch's diagnostic does not provide unequivocal structural evidence for *not* as an adjoined adverb. It is not inconceivable that the reanalysis of *not* as a sentential negator had already taken place by the Early Middle English period. The relative positions of *not* and the finite verb fail to distinguish sentential negator and adverbial uses of *not*. A fixed low position for *not* is sufficient to derive all examples of *not*.

The second potential derivation of pre-verbal *not* is variation in verb movement patterns and the landing site of the finite verb. Failure of V to T movement will result in pre-verbal *not*, even when *not* is analysed as specifier of a low NegP. This kind of analysis is most appropriate for the few Late Middle English examples of pre-verbal *not* (86) once it is generally accepted that the loss of V to T movement begins, circa 1420-1500 (Warner 1997). The general tendency for the

finite verb to precede *not* in LME shows that the loss of V to T movement is not very advanced in ME.

- (86) And whils þou may, do pryve penance, þat al men þar nocht wyt
and whilst you may, do private penance, that all men there not know
'and whilst you can, do private penance, so that all men there do not
know.'
(CMROLLEP,101.614)

This section has demonstrated that a simple estimate of adverb *not* based on its occurrence pre-verbally is too simplistic, ignoring other potential derivations for pre-verbal *not* in Middle English. Once these alternative derivations are taken into account, there is little unambiguous evidence for adverb *not*. Therefore, my Middle English data are consistent with a low frequency of adverb *not* and an early date for the reanalysis of *not*. Frisch's (1997) estimate of adverb *not* in Early Middle English does not have a firm analytical basis once other facts concerning the syntax of ME are taken into consideration. The general picture which emerges is one in which the distribution of *not* is consistent with its reanalysis as a sentential negator prior to the earliest Middle English period.

2.4.3 On the relative positions of negators, adverbs and objects in Early Middle English

The occurrence of an object pronoun between the finite verb and the negator is used by van Kemenade (2000) as evidence for a low negation position in Middle English (87). Contrary to van Kemenade's (2000) claims, the relative ordering of *not* and an object pronoun provides evidence for a low position for *not* from Early Middle English onwards (see (87a)). These orders do not emerge during Middle English.

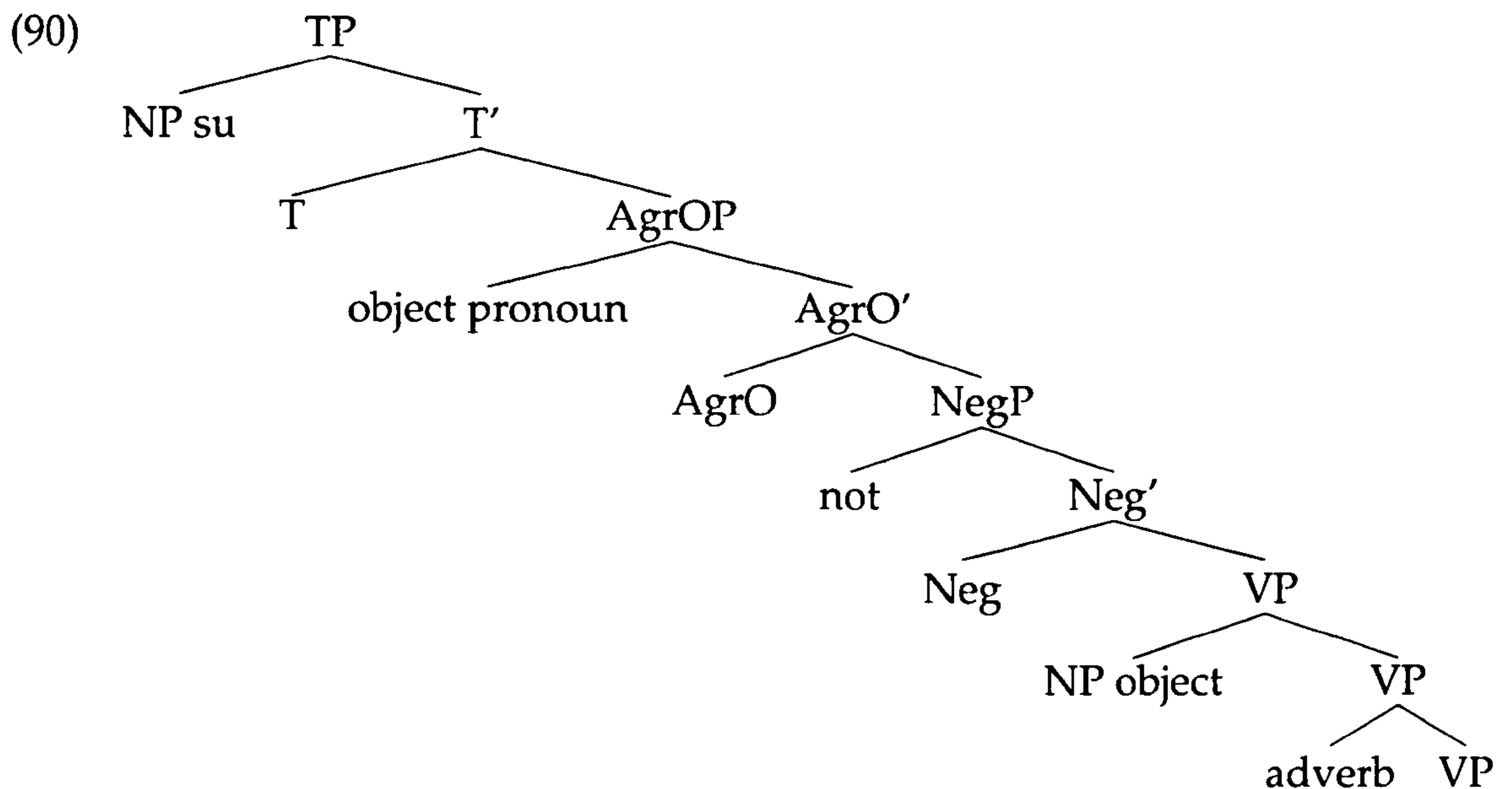
- (87) a. ȝif þat hali writ ne wiðseið þe naht
if that holy writ NEG abandon you not
'if you do not abandon that holy writ'
(CMVICES1,101.1223)
- b. as his men wiste *hit* naht
as his men knew it not
'as his men did not know it'
(CMBRUT3,13.347)

- c. if þou ne sustayne us noghte
 if you NEG sustain us not
 'if you do not sustain us'
 (CMEDTHOR,39.548)

Haeberli and Ingham (2003) take this argument one step further for Early Middle English *not*. They claim that whilst postverbal object pronouns precede *not* (88), full NP objects do not (89). This distribution is peculiar to early English *not*. Negators in other Germanic languages, such as German *nicht*, West Flemish *nie* allow scrambling of both object pronouns and object NPs across them.

- (88) þt ich ne seo hire nawt heonne-forð mare
 that I NEG see her not henceforth any more
 'that I will not see her any more'
 (CMJULIA,123.489, Haeberli and Ingham (2003, ex.16a))
- (89) þe ne wilen noht here sinnes forletan
 who NEG want not their sins renounce
 'who does not want to renounce their sins'
 (CMTRINIT,83.1110, Haeberli and Ingham (2003, ex.13b))

Haeberli and Ingham (2003) argue that the distribution of objects relative to *not* distinguishes *not* from adverbs. Object pronouns may move across both adverbs and *not*. Object NPs may move across adverbs, but always remain lower than *not*. They argue that the negator occupies a structurally higher position than adverbs, across which object pronouns, but not object NPs can move (a partial tree is given in (90)).



However, I find 3 examples of the order 'NP object - not' in the period 1150-1250, which are potential counterexamples to Haerberli and Ingham's conclusion (91). All three have the NP object following the subject but preceding *not*. Examples like (91) are infrequent, accounting for only 3/74 (4%) examples of *not* in clauses with nominal objects.

- (91) a. Gif þu þe seluen for þissere forbisne ne wilt naht neþerin
 if you your self for this example NEG will not abase
 'if you will abase yourself according to this example...'
 (CMVICES1,49.554)
- b. þæt tu þe seluen naht ne miht helpen
 that you your self not NEG can help
 'that you cannot help yourself'
 (CMVICES1,65.708)
- c. þæt þu þis weork naht ne forlate...
 that you this work not NEG neglect...
 'that you do not neglect this work...'
 (CMVICES1,93.1097)

When compared to the frequency of 'NP object - adverb' orders as a whole for the same period, we see that the frequency of clauses like (91) is much lower than the frequency of clauses like (92). Taking adverbs as a whole, the frequency of 'NP object - adverb' order is n=106/696 or 15%. However, different classes of adverbs behave differently with respect to nominal object movement across them. For

example, the frequency of 'NP obj - adv' orders with the temporal adverbs *never*, *then*, *oft* ('never, then, often') (93) is much lower at n=7/103 or 7% for the period 1150-1250. Once different types of adverb are taken into account, the similarities between *not* and the class of discourse or temporal adverbs increase.

(92) þu wilt godes lore bliðeliche understonden and liernin
 you will God's teaching gladly understand and learn
 'You will gladly understand and learn God's law'
 (CMVICES1,47.532)

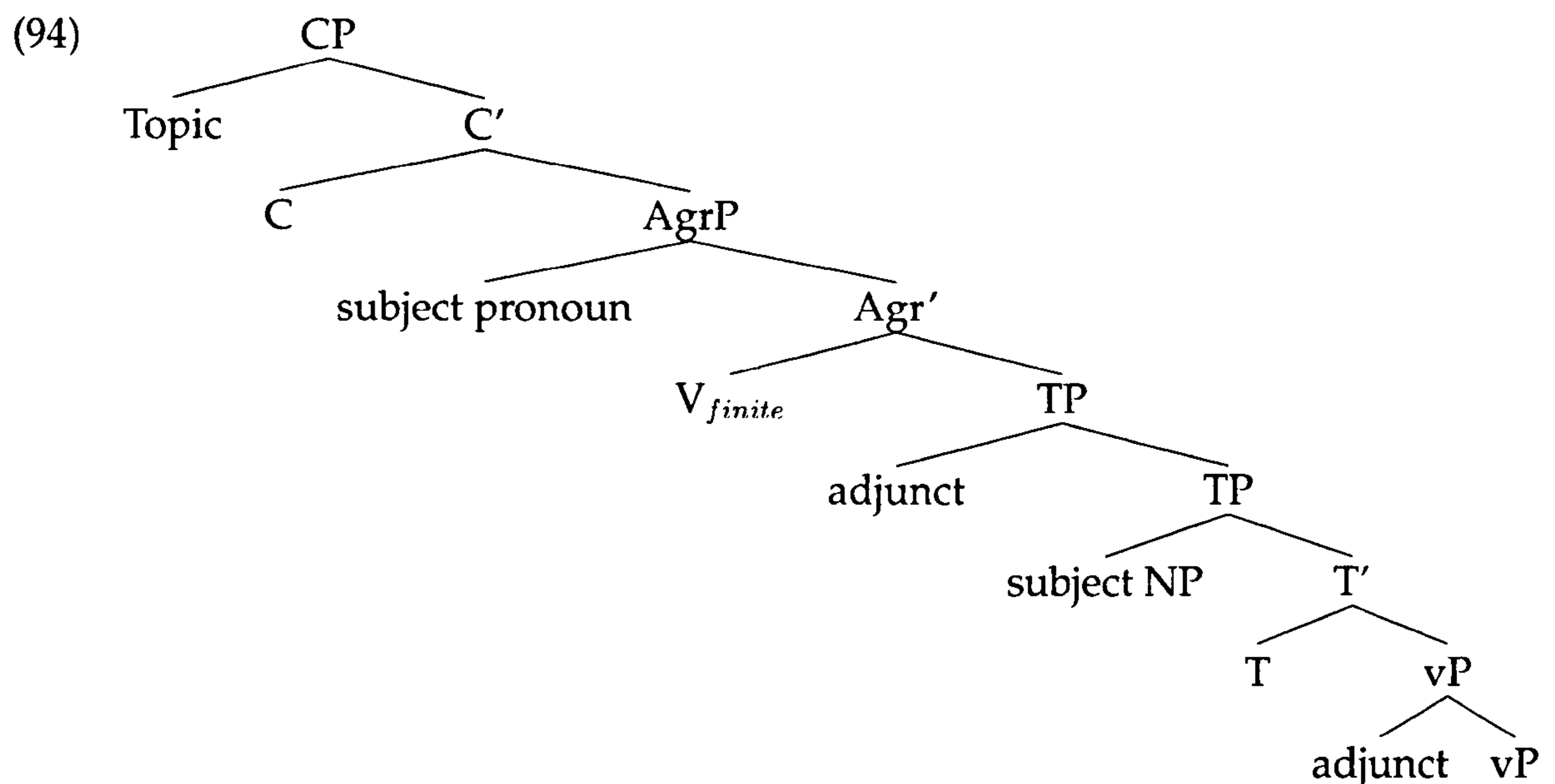
(93) þat man his licames lust drige ofte
 that one his body's lust endure often
 that a man often must endure his body's lusts'
 (CMTRINIT,31.419)

Two conclusions emerge from this discussion. First, the order 'NP object - not' is not impossible, and should not be ruled out in EME. Second, once different classes of adverbs are taken into account, the differences between *not* and certain discourse or temporal adverbs look much less clear cut than Haeberli and Ingham (2003) claim.

Data from later periods of ME maintain the similarities between *not* and the temporal adverbs *never*, *then*, *oft*. In the LME periods 1350-1430 and 1430-1500, the incidence of 'NP object - adv' orders with these adverbs is only 3/343 or 1%. This distribution is largely consistent with the non-occurrence of the order 'NP object - not' in the same periods. What these tentative results show is that without further detailed analysis of NP object movement, in respect of particular adverbs or groups of adverbs, it is not clear that the position of *not* is necessarily distinct from the position of all adverbs in ME.

2.4.4 The distribution of Middle English *not* relative to subjects

There are two possible adjunction sites for negative adjuncts which are internal to the clause. These are distinguished by the position of the adjunct relative to a full NP subject. Recall that the clause structure I assume for Old and Middle English distinguishes two subject positions, the higher one typically for subject pronouns, and the lower one exclusively for full NP subjects (94). This is the structure proposed by Haeberli (2002b) for Old English clauses, with V to Agr movement in main clauses and V to T movement in subordinate clauses (Haeberli 2001).



Haeberli (2002a) demonstrates that there is no adjoined position for adverbs at the AgrP level. Using German and Dutch data, he shows that adverbs can intervene between a finite verb in C^0 and a full NP subject in spec,TP , but not between a finite verb in C^0 and a pronoun subject in spec,AgrP . However, adverbs can appear in spec,CP and adjoined to CP. In summary, there are three positions for negative adjuncts in relation to subjects: preceding a subject pronoun (adjoined to CP or in spec,CP), between the finite verb and a full NP subject, and following a full NP subject. The positions available to *not* in main clauses are more restricted than the positions available to adverbs. Negative adverbs can appear in spec,CP or as CP adjuncts, whereas *not* does not appear there (95), except in one instance (96).

(95) Neuyr took he giftes of man
 Never took he gifts from man
 'He never took gifts from man'
 (CMCAPCHR,54.666)

(96) naht ne scealt tu libben
 not NEG shall you live
 'you shall not live'
 (CMVICES1,147.1833)

Much of the literature (for example Frisch (1997) or van Kemenade (2000) for English) assumes a correlation between the semantic impoverishment of sentential negators as conveyors of purely grammatical functional meaning (as gram-

maticalised operators) and positional restrictions on their distribution. The syntactic correlate of functional meaning is reanalysis of the negator as the specifier of a functional projection. The sentential negator is thereby restricted to occur in a fixed position, which is determined by the position of the negative head with which it must agree. Two potential positions for *not* are distinguished by the position of *not* relative to subjects. My aim here is first to describe the distribution of *not* over the course of the entire ME period and compare it with the distribution of adverbs. I will consider two issues:

1. What is the position of *not* in the Middle English period? Does *not* undergo any change in distribution which might indicate its reanalysis as a sentential negator, for example impoverishment of the range of positions it can occupy?
2. Does the range of positions available to *not* distinguish it from discourse adverbs?

Full consideration of these issues will involve establishing the distribution of *not* and other adverbs relative to subjects in spec,TP. We will see that the way to address this issue is not to consider the distribution of *not* and adverbs in relation to all subjects. Variation in the placement of nominal subjects will be taken into account. Only a subset of subjects can be used as diagnostics for high and low negation positions. The positions available to positive adjuncts and negative adjuncts like *never* will be compared with those available to *not* to establish whether there is any positional evidence to distinguish sentential negators from adjuncts which would indicate the reanalysis of *not* in ME.

Van Kemenade (1999, 2000) develops an account of the position of *not* based on an observation by Einkenkel (1912). Einkenkel (1912) and van Kemenade (1999) observe that full NP subjects often follow *not* (97a) whereas pronoun subjects always precede *not* (97b).

- (97) a. also ne accordeth nat *the poeple* to that
 also NEG accord not the people to that
 'also the people do not accept that'
 (Chaucer *Melibee* 2132, van Kemenade (2000, 69, ex.23b))
- b. yet ne wolde *he* nat answer sodeynly
 yet NEG would he not answer suddenly
 'yet he would not answer suddenly'
 (Chaucer *Melibee* 2222, van Kemenade (2000, 69, ex.23a))

The relevant clauses under investigation have their subject in the INFL complex, so include all clauses where the subject does not move to spec,CP: that is NegV1 clauses and clauses with non-subject topics. In these clauses, it is possible to determine the position of *not* in respect of other elements in the INFL complex, such as subjects.

On this basis, van Kemenade (1999; 2000) identifies a high position for Middle English *not* preceding full NP subjects. She takes this as evidence for the high position for NegP, intervening between AgrP (whose specifier hosts subject pronouns) and TP (whose specifier hosts full NP subjects). However, Haeberli (2000) shows that the high position is not exclusive to the negatives *na*, *not* or negative adjuncts. He cites examples of non-negative discourse oriented or temporal adverbs in this position (98). The appearance of *not* in this position does not distinguish it from adverbs.

- (98) Wende þa porphire to freinen þis meiden
 turned then Porphire to question this maiden
 'Then Porphire turned to question this maiden'
 (Kathe, 39.328, Haeberli (2000, 123, ex.21a))

Van Kemenade (2000) also observes a lower negation position in Middle English (99) which she claims is a Middle English innovation.⁷

- (99) so slyly that the preest it nat espide
 so slyly that the priest it not saw
 '...so slyly that the priest did not see it'
 (Chaucer, *Canon Yeoman's Tale*, 1230, (van Kemenade 2000, 72, ex.28d))

Quantitative investigation of the distribution of *not* in the PPCME2 data shows both the orders '*not*-subject' and 'subject-*not*' in EME and LME. These data provide no evidence for the emergence of the low position in ME. *not* appears in two positions relative to NP subjects in main clauses in ME (Table 2.5). These are the same two positions available to temporal and discourse adverbs.

Although there are examples of *not* both preceding a nominal subject and following a nominal subject in main clauses, the same is not true of subordinate clauses. Typically, *not* in subordinate clauses follows the nominal subject. There are 22 exceptions to this pattern (100) and (101) (Table 2.6).

⁷It is interesting that all the examples van Kemenade (2000, ex.28) gives (such as (99)) are examples of subordinate clauses. I deal with the distribution of *not* in main and subordinate clauses separately, owing to the syntactic differences between these clause types.

Period	not-NP su	NP su- not	Total	% not- NP su
1150-1250	11	4	15	73%
1250-1350	10	0	10	100%
1350-1420	3	1	4	75%
1420-1500	1	0	1	100%
Total	25	5	29	86%

Table 2.5: The position of *not* relative to a post-verbal full NP subject in non-conjoined main clauses

- (100) so þt in us ne be nouȝt oure owne wittes ne oure owne willes but his
 so that in us NEG are not our own wits nor our own wills but his
 onliche...
 only
 ‘so that in us are not our own wits or our own wills but his only’
 (CMVICES4,108.212)
- (101) And so had they done had not *an olde knyght* com amonge them...
 And so they had done had not an old knight come amongst them...
 ‘And so they would have done if an old knight had not come amongst
 them’
 (CMMALORY,636.3814)

Period	not-NP su	NP su- not	Total	% not- NP su
1150-1250	1	22	23	4%
1250-1350	2	20	23	10%
1350-1420	10	292	302	3%
1420-1500	9	150	159	6%
Total	22	484	506	4%

Table 2.6: The position of *not* relative to a post-verbal full NP subject in subordinate clauses

Haeberli and Ingham (2003) take issue with van Kemenade’s (2000, 72) claim that the low position for *not* emerges during Middle English. Tables 2.5 and 2.6 show that there is good evidence for the low position in the earliest Middle English period, as Haeberli and Ingham (2003) claim, particularly in subordinate clauses.

The apparent differences between the distribution of *not* in main and subordinate clauses pose problems for an analysis of *not* which aims to account for the distribution of *not* in both clause types. Ideally, we would like to claim that the status and position of *not* is the same in both clause types, but the data appear to

contradict this. We are left facing one of two conclusions. Either the position of *not* is different in main and subordinate clauses, or the position of NP subjects is different in main and subordinate clauses. Whilst the distribution of *not* relative to NP subjects might be thought sufficient to identify two positions for *not* in the clausal architecture, one higher than TP and one lower than TP, we need some account of the different distribution of *not* in main and subordinate clauses.

Up to this point we have been assuming that all nominal subjects occupy spec,TP in both main and subordinate clauses. Van Kemenade (1997b) claims that certain types of nominal subjects remain lower than TP. Van Kemenade's claim suggests another solution to the apparent variation in *not* placement. Variability in the position of subjects in main clauses due to discourse, weight, syntactic or informational requirements may be sufficient to explain the relative orderings of *not* and nominal subjects found in main clauses, and the differences between main and subordinate clauses. Justification for two positions for *not* rests on the assumption that all nominal subjects appear in spec,TP. Haeberli and Ingham (2003) and van Kemenade (1997b) argue that this assumption is not justified. Therefore, to ascertain whether there are two syntactic positions for *not* we need to consider just those clauses in which the subject is in spec,TP. Hence we need to determine which clauses fall into this group.

Van Kemenade discusses the position of ME *not* in relation to all nominal subjects, assuming that nominal subjects uniformly appear in spec,TP. Haeberli and Ingham (2003) take issue with this assumption in their discussion of EME *not*. Two types of low subject must be taken into account: VP-internal subjects, and postposed subjects. In order to get a clearer assessment of the positions available to *not* we need to exclude clauses in which the subject does not occupy spec,TP. Van Kemenade (1997b) argues that subjects remain lower than spec,TP in some clauses. She identifies the relevant clauses as those with impersonal, unaccusative or modal verbs.

For this period, van Kemenade (1997b) analyses modal verbs as lexical raising verbs of the category V which do not have a thematic subject. Roberts and Roussou (2003, 40) propose a similar biclausal analysis of OE and ME pre-modals. So there are two spec,TP positions in structures with pre-modals, one associated with the modal, the other associated with the lexical verb. The failure of subject raising will leave the subject in the lower spec,TP, lower than the modal and any negation associated with it. It is well known that OE and ME have expletive *pro*, in raising and impersonal constructions. Therefore, raising of the lexical sub-

ject into the higher spec,TP is not categorical, and examples of *not* preceding the subjects in constructions with modals are not evidence for a high position for *not*.

Concerning the position of *not* in subordinate clauses, 20/22 exceptions to the post-verbal, post-subject positioning of *not* have *be*, modal or unaccusative verbs (100, 101). Figures from the PPCME2 indicate that subjects stood in post-verbal position 1205/10974 or 11% of the time with these verbs. The frequency of *not*-subject orders with the same verbs is 20/341 or 6%. The frequency of *not*-subject orders in subordinate clauses is consistent with a single position for *not* below TP plus variable use of a low subject position for subjects of *be*, unaccusatives and modals. In subordinate clauses the evidence points to a low position for *not* throughout ME, rather than the development of a low position for *not* as van Kemenade (2000, 72) claims. The two exceptions to post-subject placement of *not* with transitive verbs appear in LME without *ne*. Therefore, these two instances of *not* might represent head (Neg⁰) *not*.

We now need to ascertain whether it is plausible for all main clause instances of the order 'be/unaccusative - *not*-subject' to be derived by late subject placement. Van Kemenade (1997b) claims that expletive *pro* also appears with *be* and unaccusatives. There are 20 examples of *be* and unaccusatives with *not*. 16/20 follow *not*. Of those subjects which follow *not*, 10/16 are heavy subjects which are postmodified by relative clauses, adjectival phrases or adjunct phrases, or are conjoined NPs (102).

- (102) a. Ne cum nouȝt to me *þe vice of pride*
 NEG comes not to me the vice of pride
 'The vice of pride does not come to me'
 (CMEARLPS,42.1788)
- b. forsothe to Adam was not founden *an helpere lijk hym*
 truly for Adam was not found a helper like him
 'truly, a helper like him was not found for Adam'
 (CMOTEST,II,20G.120)

These are probable candidates for late subject constructions. Warner (2005) shows that long or heavy subjects favour placement later in the clause. This lends support to the idea that the *not*-subject order often arises through late placement of subjects, either VP internal subjects or extraposed subjects. Without knowing more about the information structuring and pragmatic factors operating on late subject placement it is not possible to demonstrate conclusively that late subject placement is responsible for all *not*-subject orders, but these data indicate that

this analysis is at least a plausible one, and weaken the argument for positioning *not* higher than TP.

In order to control for late subjects with *be*, unaccusatives and modals in main clauses, I exclude these verbs from the analysis. Clauses with these verbs account for most of my data (n=22/25) examples). By limiting my investigation to exclude potential late subject constructions, I limit the number of main clause examples available to the analysis quite severely. For the whole ME period, there are only 3 examples of *not* preceding a subject NP in clauses with transitive or unergative lexical verbs (103).⁸

- (103) a. Swo ne answarede noht *Moyses* ure Drihten...
 Thus NEG answered not Moses our Lord...
 'Moses did not answer our Lord thus...'
 (CMTRINIT,215.3009)
- b. Ne underouð nawt qð he þis ilke word *alle*
 NEG uphold not said he this same word all
 'All do not uphold this same word' he said
 (CMHALI,141.201)
- c. Nule naut ure *lauerd* þt amon for an þing beo twizen
 NEG-intends not our Lord that a man for one thing be twice
 idemed
 judged
 'Our Lord does not intend that a man should be judged twice for the
 same thing'
 (CMANCRIW,II.228.3297)

This is insufficient evidence to determine whether *not* typically precedes or follows TP in main clauses. Two of the three examples of *not*-subject appear in EME and may reflect use of *not* as an adjoined adverb rather than a sentential negator. Alternatively, these clauses may have late subjects for reasons of discourse or information structure which I have not taken into account during the analysis.

Once potential variability in the position of subjects relative to ME *not* is taken into account, we see stronger evidence for a low position for *not* (TP>*not*>vP).

⁸The loss of negative initial clauses in Middle English reduces the number of contexts with post-verbal subjects considerably. In clauses without a non-subject topic the subject moves to spec,CP as is typical in verb-second languages.

The status of the high position for *not* is not clear. The evidence for it is weak. Although it is difficult to account for all ‘*not*-subject’ orders as late subject constructions, this is a possibility. Alternatively, we might account for the few instances of high *not* as adverbial uses of *not* as a TP-adjunct rather than as a sentential negator.

2.4.5 The distribution of Old English *na* relative to subjects

I will now turn my attention to Old English *na*. The status of *na* is contested in the literature: van Kemenade (1999; 2000) claims that *na* is a secondary negator, whilst van Bergen (2003) and Ingham (2005) claim that *na* is a discourse adverb. If van Kemenade is correct, change in sentential negation strategies under Jespersen’s Cycle begins in English much earlier than previously assumed. Table 2.7 shows that *na* is not particularly frequent in any of the Old English periods as a proportion of all negative clauses. It is less frequent in subordinate clauses than in main clauses.

Period	Non conjoined main cl			2nd conjuncts			Subordinate cls		
	na/no	Total	% na	na/no	Total	% na	na/no	Total	% na
850-950	131	778	17%	36	460	8%	82	2278	4%
950-1050	284	2818	10%	131	2280	6%	121	4162	3%
1050-1150	119	675	18%	76	580	13%	102	1596	6%
Total	534	4271	13%	243	3320	7%	305	8036	4%

Table 2.7: The overall frequency of *na* in non-conjoined main clauses, second conjuncts and subordinate clauses.

Van Kemenade (1999, 2000) observes that full NP subjects typically follow *na* (104b) whereas pronoun subjects always precede *na* (104a). She argues that this fixed position is typical of a sentential negator and shows continuity with ME *not*.

- (104) a. Ne het he us na leornian heofonas to wyrce^{nne}
 NEG ordered he us not to-learn heaven’s to make
 ‘He did not order us to learn to make the heavens’
 (Ælfric *Lives of Saints* XVI.127, van Kemenade (2000, ex.14a))
- b. Ne sæde na ure Drihten þæt he mid cynehelme oððe mid
 NEG said not our Lord that he with diadem or in
 purpuran gescryd cuman wolde to us
 purple clothed come wanted to us

'Our Lord did not say that he wanted to come to us with a diadem or clothed in purple'

((*Ælfric Lives of Saints* XXXI.762, van Kemenade (2000, ex.14b))

Van Kemenade takes this as evidence for the high position for NegP, intervening between AgrP or FP in van Kemenade's (2000: 65, ex.17) structure (whose specifier hosts subject pronouns) and TP (whose specifier hosts full NP subjects). However, there are a substantial number of postverbal NP subjects preceding *na* which constitute evidence for the low position (106a-106d). Van Kemenade (2000) notes examples of *na* in a lower position, but she does not consider these examples in detail. Such examples occur at all periods of Old English, and account for 54/105 (51%) of all instances of *na* in main clauses with full NP subjects in the YCOE. Examples like (106a-106d) are not particularly rare at any point in Old English. There are instances of *na* in positions both higher and lower than NP subjects at all periods of Old English (105a-106d). If we accept that *na* is a sentential negator in Old English, there is good evidence for its position being low, evidence which challenges van Kemenade's assertion that the low position for secondary negators is a Middle English development.

(105) finite verb - *na* - full DP subject

- a. Ne do na se Godes þeowa Godes þenunge for sceattum
NEG do NA the God's people God's ministry for payment
'God's people do not perform God's ministry for payment'
(ALet1T,+ALet_1_[WulfsigeT]:72.14)
- b. Ac us ne het na se hælend him beon gebeogole
But us NEG called NA the Lord to-him to-be submissive
'But the Lord does not call us to him to be submissive'
(ALet6,+ALet_6_[Wulfgeat]:123.48)
- c. & þone leahtor nyston na þa oðre broðra.
and the sin NEG-knows NA the other brothers
'and the other brothers do not know the sin'
(GDC,GDPref_and_4_[C]:40.326.28.4910)

(106) finite verb - full DP subject - *na*

- a. Ða ne onhran þæt fyr him no
Then NEG touched that fire him not
'Then the fire did not touch him'
(comart3,Mart_5_[Kotzor]:Ja17,B.23.155)

- b. Ne teah *Crist* him na to on þisum life land. ne welan swa swa
 NEG drew Christ him NA to in this life land nor riches just as
 he be him sylfum cwæð:
 he by him self said
 ‘Christ did not draw land nor riches to him in this life, just as he him-
 self said’
 (CathHomI,+ACHom_I,_10:263.145.1943)
- c. Ne wyrcoð *God* na þas wundra æt nanes iudeisces mannes
 NEG performs God NA these miracles at no Jewish man’s
 byrgene
 tomb
 ‘God does not perform these miracles at any Jewish man’s tomb...’
 (CathHomI,+ACHom_I_20:344.253.4092)
- d. Ne forseon ða *gelæredan* na ða ungelæredan
 NEG despise-SBJ the spiritual NA the temporal
 ‘The spiritual life does not despise the temporal’
 (WHom,WHom_10a:45.806)

The overall distribution of *na* relative to subjects is similar to ME *not*. Tables 2.8 and 2.9 show the distribution of *na* in main and subordinate clauses. Like ME *not*, the data show two positions for *na*, preceding and following NP subjects. In main clauses, *na* occurs preceding or following an NP subject with similar frequency. The predominant pattern in subordinate clauses is for *na* to follow a subject NP. This distribution is similar to that which we saw for ME *not*.

Period	na-su	su-na	Total	% na-su
850-950	5	12	17	29%
950-1050	32	27	59	54%
1050-1150	14	15	29	48%
Total	51	54	105	49%

Table 2.8: The position of *na/no/not* relative to a full NP subject which is post-verbal in non-conjoined main clauses.

Having established that there is a low position for *na* in main and subordinate clauses, it remains to be determined whether all instances of *na* can be analysed as occupying the low position, contra van Kemenade (1999; 2000), or whether we need to claim two positions for *na*. This question assumes greater importance in the light of comments by van Bergen (2003, 190) who cites the variability in the position of *na* as evidence to analyse *na* as an adjoined adverb rather than

Period	na-su	su-na	Total	% na-su
850-950	3	15	18	17%
950-1050	1	25	26	4%
1050-1150	4	21	25	16%
Total	8	61	69	12%

Table 2.9: The position of *na/no/not* relative to a full NP subject in subordinate clauses.

the specifier of a functional projection, which she claims should be fixed in the clausal hierarchy. A further argument against analysing *na* as the specifier of a functional projection fixed in the clausal hierarchy is the disparity in its position according to clause type. In both main and subordinate clauses, two positions for *na* relative to nominal subjects are attested. However, the distribution of *na* across these two positions is different in the two clause types.

There are very few ($n=8/69$ or 12%) (ex. 107) and (ex. 108) instances of *na* preceding a subject in subordinate clauses, compared to $n=51/105$ (49%) of the same order in main clauses. 7/8 examples of 'na-subject' occur in clauses with *be*, modals or unaccusatives (107). The subject of these verbs can remain in VP. So these examples do not challenge the view that the position of *na* in subordinate clauses is lower than TP.

- (107) and cwæð þæt ne cymð na antecristes tima þa hwile þe se
 and said that NEG comes not antichrist's time until that the
 casere his cynedomes gewylt
 emperor his kingdom-GEN wishes
 'and said that the Antichrist's time does not come until until the emperor
 of-his kingdom wishes
 (coaelhom,+AHom_29:5.4074)
- (108) forðæm þe na se ðorn ðære gitsunga ne wyrð forsearod
 because NA the thorn the-GEN desire-GEN NEG becomes withered
 on ðæm helme
 on the tree
 'because the thorn of desire does not become withered on the tree'
 (cocura,CP:45.341.9.2292)

Haeberli and Ingham's proposal for Early Middle English subordinate clauses can be extended to Old English *na*. Once the possibility of late subjects is taken into account in the analysis of subordinate clauses, we can say that the position for *na* is a low one (below TP).

The effect of late subject constructions on the distribution of *na* in main clauses remains to be determined in more detail, but the position of the subject is not fixed in these clauses and does not allow the two positions for *na* to be distinguished. I will control for late subjects by excluding the verbs which permit late subjects, as I did in the discussion of *not* (section 2.4.4). These include the verb *be* (109), unaccusative verbs like *cuman* 'to come' (110), without an external argument, whose subjects can remain lower than TP (van Kemenade 1997b). Van Kemenade (1997, 336) claims that the antecedents of PDE modals also lack an external argument and the position of their subject is similarly ambiguous (111).

- (109) Næs na Cristes þrowung gefremmed on ðisum dæge.
 NEG-was not Christ's suffering accomplished on this day
 'Christ's suffering was not accomplished on this day'
 (CathHomI,+ACHom_I,_14.1:296.179.2709)
- (110) þonne ne cymð na to eow se frofergast.
 then NEG comes not to you the holy spirit
 'then the holy spirit does not come to you'
 (GDC,GD_2_[C]:38.177.16.2161)
- (111) Ne mihte na se deafa ne se dumba abiddan þone halgan Hælaend his
 NEG can not the deaf or the dumb ask the holy Lord his
 agen hæle
 own salvation
 The deaf or the dumb cannot ask the holy Lord for his own salation'
 (coaelhom,+AHom_18:99.2544)

Another clause type which has the nominative argument within the VP are clauses with dative experiencer verbs, in which the dative experiencer is the thematic subject (112) (Allen 1995).

- (112) ne þinceð me na þat wundorlic...
 NEG seems me NA that miraculous...
 'that does not seem miraculous to me'
 (cogregdC,GDPref_and_3_[C]:24.227.17.313)

Restricting the analysis to postverbal full NP subjects of active transitive verbs leaves only 12 clauses. 8/12 (66%) have the order '*na* - subject', while 4/12 (33%) have the order 'subject - *na*'. In 4 of the 8 examples in which *na* precedes the subject, the subject is clause final, so the possibility of extraposition of the subject

cannot be discounted. These clauses are too few to support any firm generalisations about the position of *na* in main clauses. Taking main and subordinate clauses together, we see that the evidence for a high position is much less robust than the evidence for a low position, as we saw for ME *not*. There are some apparent exceptions to the low position for *na* like (113) which remain to be accounted for in further research.

- (113) Ne do na se Godes þeowa Godes þenunge for sceattum
 NEG do NA the God's people God's work for payment
 'God's people do not do God's work for payment'
 (colwssigeXa,+ALet_1_[Wulfsige_Xa]:72.88)

However, the analysis here demonstrates that the evidence for a high position for *na* is unclear and marginal in comparison to the evidence for the low position, once variability in the placement of subjects is taken into account. The analysis in this section does not address the question of whether *na* is a sentential negator or an adjoined adverb, and it is this question to which I now turn. Van Bergen (2003) argues that the distribution of *na* across two positions is evidence for its status as an adverb. However, I have shown that the evidence for two positions is much less robust than van Bergen (2003) supposes.

2.5 Conclusions: evidence for *not* and *na* as sentential negators?

The preceding sections have localised the position of *na* and *not* to a position between TP and vP. I argued that many of the apparent counterexamples to this claim should be discounted. Subordinate clauses provide clearer evidence of the position of *na*, because it is much easier to isolate and examine just those subordinate clauses which have pre-verbal spec,TP subjects, preceding a finite verb in T⁰. In these clauses, the position of *na* and *not* is low, and largely fixed. However, the position occupied by *na* and *not* does not distinguish *na* and *not* from positive and negative adverbs, which also appear in a position between TP and vP.

Whilst the distribution of *na* and *not* is distinct from the position of other negative adverbials like *næfre* 'never' which occupy positions between AgrP and TP as well as between TP and vP, this distinction is not necessarily one between adverbs and sentential negators. It could equally mark a distinction between different types of adverbs. Although the fixed position for *na* and *not* suggests their

reanalysis as sentential negators occupying a fixed position in the clause, none of the positional diagnostics used to distinguish adverbs and negators which I discussed in this chapter actually distinguishes adverbs and negators. There is no empirical distinction to be made between a vP adjunct position and the position for *na* and *not*, and no clear evidence for a distinct position associated with sentential negation. This has important implications for the discussion of NegP in chapter 4.

There are three other facts which suggest a distinction between sentential negative markers and negative adverbs. First, *na* and *not* do not often co-occur with negative adjuncts or negative arguments. This distinguishes OE *na* and EME *not* from negative adverbs like *næfre* which do appear in negative spread. In main clauses, 52/277 (18.8%) of *næfre* co-occur with negative arguments or adjuncts (114), whereas only 6/823 (0.7%) of *na* appear in these contexts (115). A similar situation holds in subordinate clauses: where 9/320 (2.8%) instances of *na/no* co-occur with negative arguments or adjuncts (116). The figure is 55/499 (11%) for *næfre* (117).

- (114) ne nan cristen man þat næfre ne sceal gelyfan
 nor no christian man that never NEG ought believe
 'and no Christian man ought to believe that'
 (cocathom1,+ACHom_I,_20:340.145.3982)
- (115) And man ne sceal hit na don nanum samcwyce men
 And one NEG ought it NA do no half-dead man
 'and one ought not do it to any half-dead man'
 (colwstan2,+ALet_3_[Wulfstan_2]:12.11)
- (116) þæt na nan ænlipig ne modige
 that NA no individual NEG grow proud-SBJ
 'that no man ought grow proud'
 (cobenrul,BenR:65.125.8.1203)
- (117) he næfre nanne synne ne geworhte
 he never no sin NEG did
 'he never did any sin'
 (cocathom2,+ACHom_II,_3:21.91.511)

The same distribution is seen in the case of EME *not*. In the EME period 1150-1350, there are only 4/1318 (0.3%) examples of *not* which co-occur with negative arguments or adjuncts, compared with 24/255 (9%) of *never*.

Second, the distribution of *na* and *not* across clause types is not the same as the distribution of adverbs across clause types. The proportion of negative clauses involving *næfre* 'never' is roughly the same for main and subordinate clauses. 322/7942 (4%) of negative main clauses have *næfre*. This compares with 401/8493 (5%) of negative subordinate clauses. However, the distribution of *na* across the two clause types is markedly different. 777/7591 (10%) of main clauses have *na*, whilst only 305/8036 (4%) of subordinate clauses have *na*. This distribution distinguishes *na* from *næfre*. We see the same pattern with *not* and *never* in EME. In the period 1150-1250, 357/541 or 66% of non-conjoined main clauses have *not*, whilst only 344/947 or 36% of subordinate clauses have *not*. The EME distribution of *never* is the same in main clauses and subordinate clauses. 127/1610 or 8% of main clauses have *never*, and 128/1662 or 8% of subordinate have *never*. In chapter 5, I argue that the difference between main and subordinate clauses is an important factor in the introduction of a secondary negator at stage two of Jespersen's Cycle. I infer from this that OE *na* is already behaving like a sentential negator in this respect.

Third, there is evidence which indicates that some instances of *na* have undergone semantic reanalysis or bleaching even in OE, losing lexical meaning to become a grammatical marker of negation. We see instances of *na* used in contexts where we would not expect it if it had full lexical meaning as an adverb. Eythorsson (2002, 220, note 12) observes that the etymological root of *na* is *ne+a*. OE *a* is a temporal adverb, meaning 'ever, always' (118).

- (118) a. and hellewitu he him sceal a ondrædan
and torment he himself ought always fear
'and he ought always fear hell's torment'
(cobenrul,BenR:4.17.20.262)
- b. þisse halgan Marian saule biþ a gewuldrod mid Gode
this holy Mary's soul is always glorified with God
'The holy Mary's soul is glorified with God for ever'
(coblick,LS_20_[AssumptMor[BlHom_13]]:147.170.1818)

There are some clauses which clearly have a reading where the reading of *na* as 'never' is much less felicitous than a reading of *na* as a negative marker 'not'. These include clauses where a specific point in time is mentioned (119-120), and declarations of identity which are not temporally anchored (121-122).

- (119) Buton gehwylc mann beo acenned of wætere & of þam Halgan Gaste,
Unless each man is born of water and of the Holy Spirit,

- næfð he na Godes rice
 NEG-have he not (?never) Gods kingdom
 'Until each man is baptised in water and in the Holy Spirit, he does not possess God's kingdom'
 (coaelhom,+AHom_1:393.205)
- (120) Hi ne beoð na cild soðlice on Domesdæg
 They NEG are not(?never) children truly on Doomsday
 'Truly, they are not children on Doomsday'
 (coaelhom,+AHom_13:109.1932)
- (121) Nis se sunu na geworht ne gesceapen
 NEG-is the son not made nor created
 'the son is not made or created'
 (cocathom1,+ACHom_I,_20:337.55.3882)
- (122) ne eom ic na Crist
 NEG am I not (?never) Christ
 'I am not Christ'
 (cowsgosp,Jn_[WSCp]:1.20.5769)

These distributional facts are sufficient to distinguish *na* and *not* from other adverbs. The parallels between the distribution of *not* and *na* support the view that at least some OE *na* are used as sentential negators, with grammatical functional meaning, rather than negative adverbs with lexical meaning. These data support van Kemenade's (1999, 2000) analysis of *na* as a secondary negator, and are evidence that Jespersen's Cycle has reached its second stage in some OE clauses. However, there is no evidence to distinguish the position of *na* and *not* from adverbs, and by implication, no empirical evidence to associate a particular structural position with negation.

Chapter 3

Negative initial clauses

3.1 Introduction

This chapter focuses on negative-initial Old English main clauses, in both prose and poetry. Negation is most commonly placed clause initially in Old English main clauses (n=1698/2547, or 67%). In the Old English prose, the initial negative element is usually *ne* immediately followed by the finite verb (123).

- (123) a. Nylle ic þe ofslean...
NEG-will I you kill
'I will not kill you'
(comargaC,LS_14_[MargaretCCC_303]:22.3.341)
- b. Ne het he us na leornian heofonas to wyrceenne
NEG ordered he us not learn heavens to make
'He did not order us to make the heavens'
(coaelive,+ALS_[Mark]:147.3294)
- c. ne finde ic nanne intingan on þysum men
NEG find I no fault in these men
'I find no fault with these men'
(cowsgosp,Lk_[WSCp]:23.4.5549)

The syntactic analysis of these clauses involves verb movement to a higher position in negative clauses than in non-negative declarative clauses (Pintzuk 1999, Haeberli 2002b). V to C movement is invoked in the following clause types in which the finite verb precedes a subject pronoun: negative-initial clauses, subjunctives, imperatives and following the initial adverbs *þa*, *þonne*, *nu* 'then, now' (see section 2.2.2).

Negative initial clauses in the Old English poetry do not all show inversion of a finite verb with a subject pronoun. Many negative clauses in the poetry have negative elements other than *ne* in clause initial position. These negatives are not immediately followed by the finite verb (124).

- (124) no he him þa sæcce ondred
 NEG he himself the struggle feared
 'he did not fear the struggle' (cobeowul,73.2345.1917)

The pattern seen in the Old English poetry differs from that seen in Present Day English, where a range of initial negatives trigger subject-verb inversion.

- (125) a. Never have I seen such a thing
 b. On no account should you do that

Only *ne* is immediately followed by a finite verb in C^0 in either prose or poetry in either my OE or EME data. The converse is also true: there are no initial sentential negators *ne* occurring without V to C movement.

Thus we see that the pattern of inversion common in OE and EME is different from that found in PDE. Furthermore, there is historical discontinuity between the two patterns. There is evidence that the PDE pattern of inversion emerges during Early Modern English. Nevalainen (1997) presents evidence that inversion following negatives such as *never* is variable and increasing in Early Modern English (see section 6.4.2 for discussion of this development). My data provide few Old and Middle English antecedents (n=4) for the Present-Day English pattern in (125). Whilst there are OE examples like (126) they are marginal, and all involve the sentential negator, unlike the Early Modern English pattern.

- (126) a. nane are ne dyde he him
 no honour NEG did he him
 'He did him no honour'
 (coverhom,HomU_9_[ScraggVerc_4]:224.731)
- b. nanum menn ne secgan ge þis ær mannes sunu of deaþe
 No man NEG say-SBJ you this before man's son of death
 arise
 arise-SBJ
 'You ought say this to no man before the Son of Man from death arises'
 (cowsgosp,Mt_[WSCp]:17.9.1139)

There is only 1 example of an initial negative preceding a subject pronoun in a LME clause without *ne*, which has subject verb inversion analogous to the PDE pattern (127).

- (127) neuyr took he giftes of man
 Never took he gifts of man
 'He never took gifts from men'
 (CMCAPHR,54.666)

Inversion data from ME and Early Modern English (Nevalainen 1997) challenge van Kemenade's claim that negative-initial sentences are '... a grammatical environment, beside questions, in which English throughout its history has had V movement to C.' (van Kemenade 2000, 62). Early English inversion of finite verb and subject pronoun following initial negatives is restricted to clauses with *ne* in the 9th-12th centuries. Inversion following initial negatives becomes marginal in the 12th century, and is only attested again with any frequency in the 16th century or even later (Nevalainen 1997). The Early Modern English pattern of negative inversion differs from the earlier pattern. The trigger for inversion in Early Modern English is not the sentential negator *not*. Conversely, the earlier pattern of negative inversion affected only the sentential negator *ne*. Thus, the two patterns of negative inversion observed in the history of English are sufficiently different to be considered as separate processes owing to their differences and the lack of diachronic continuity between the two patterns.

Negative inversion with the sentential negator *ne* is lost in Early Middle English. This fact demands a syntactic explanation. The relationship between the negative-initial clauses in poetry and prose demands further examination, addressing in particular the reason why only the clause initial sentential negator *ne* occurs with V to C movement. Other negatives only appear with V to C movement in Late Middle English and Early Modern English. This chapter will focus on three issues: the syntactic derivation of negative initial clauses, the relationship between the negative-initial clauses found in prose and poetry and the loss of negative inversion in Early Middle English.

The loss of negative-initial clauses is not straightforwardly a consequence of the general loss of *ne* witnessed in Middle English. In Early Middle English, the frequency of clauses with initial *ne* declines even as a proportion of all clauses with *ne* (see Table 3.1).

There are several potentially different types of inversion strategy operating in negative clauses. Clauses with imperatives (128), clauses with initial discourse

Period	Ne+Vf initial	ne+Vf elsewhere	Total
850-950	229 (67%)	115 (33%)	344
950-1050	797 (66%)	419 (34%)	1216
1050-1150	161 (60%)	106 (40%)	267
1150-1250	49 (45%)	61 (55%)	110
1250-1350	8 (15%)	47 (85%)	55
1350-1420	2 (11%)	16 (89%)	18

Table 3.1: The distribution of *ne* by position. All finite verbs. Clauses with subject pronouns only.

adverbs *þa*, *þonne*, *nu* ‘then, now’ (129), and clauses with subjunctive verbs (130) exhibit inversion even when not negated. The loss of inversion may pattern differently in all these contexts. In examining the loss of negative inversion, it is necessary to control for all these other types of inversion which operate in negative clauses.

Negative imperatives (128), negative subjunctives (130), and negatives with initial adverbs *þa*, *þonne*, *nu* ‘then, now’ (129) will be treated as separate contexts for discussion of V to C movement in negatives because imperatives and subjunctives are contexts for inversion irrespective of their polarity. These contexts all show higher frequencies of inversion than clauses with morphologically marked indicative verbs (131). Table 3.2 shows the frequency of NegV1 in three contexts in clauses with subject pronouns only. The contexts are clauses with morphologically marked indicative, subjunctive and imperative verbs. All ambiguously marked verbs are excluded.

(128) *Drihten, ne loca þu na to minum synnum*
 Lord, NEG look you not to my sins
 ‘Lord, do not look to my sins’
 (cogregdC, GD_2_[C]:32.166.5.2021)

(129) *þonne ne miht þu na þæt mot ut æton of ðæs mannes eagan*
 then NEG can you not that speck out draw of the man’s eye
 ‘then you cannot draw that speck out of the man’s eye’
 (coaelhom,+AHom_14:153.2086)

(130) *Soðlice gif Abraham ne ongæte Lazarum, ne spræce he*
 Truly if Abraham NEG understand Lazarus, NEG spoke-SBJ he
nænigra þinga swa to þam weligan men...
 in no way so to the prosperous people...
 ‘Truly, if Abraham did not understand Lazarus, he ought not have spoken
 so to the prosperous people...’

(cogregdC,GDPref_and_4_[C]:34.310.24.4640)

- (131) næfst þu nane mihte ogean me
 NEG-have you no strength against me
 'You have no strength against me'
 (cowsgosp,Jn_[WSCp]:19.11.7303)

Period	Indicative			Subjunctive			Imperative		
	V su	Total	%	V su	Total	%	V su	Total	%
850-950	148	255	58%	30	36	83%	7	7	100%
950-1050	351	651	54%	59	83	71%	52	52	100%
1050-1150	67	131	51%	16	21	76%	30	30	100%
1150-1250	17	48	35%	9	14	64%	85	90	94%
1250-1350	0	18	–	8	11	73%	10	11	91%
1350-1420	0	6	–	2	3	67%	2	2	100%
TOTAL	583	1109	53%	124	168	74%	97	103	94%

Table 3.2: The frequency of inversion of *ne*+finite verb and subject pronoun in three contexts. YCOE and PPCME2 data.

The frequency of V to C movement does not show the same decline in all contexts, even within clauses with *ne*+finite verb. The decline is most marked in clauses with unambiguously indicative verbs. There is less obviously a decline in V to C movement in clauses with subjunctive verbs. The behaviour of subjunctive verbs is obscured by the loss of the morphological subjunctive itself in Middle English, which reduces the database considerably. There is no decline in inversion in imperative clauses. Inversion in this context remains near-categorical into LME.

The data in Table 3.2 provide clear evidence to separate inversion contexts on the basis of mood. Therefore, throughout the remainder of this chapter, I will confine my discussion to unambiguously morphologically marked indicative verbs. For these verbs, inversion is only productive when they are negated by *ne*.¹ The frequency data set apart the derivation of V to C movement in negative-initial clauses with indicative verbs (NegV1) from V to C movement in other contexts. One way to do this syntactically is to appeal to the Neg-criterion to derive negative initial clauses rather than analysing NegV1 as a subcase of a more general V to C movement rule.

¹Aside from a small number of 'narrative inversion' contexts. n=296/11483 or 2.6% of clauses with indicative verbs and subject pronouns in the York-Toronto-Helsinki Parsed Corpus of Old English Prose have the indicative verb placed first in the clause, preceding the subject pronoun.

In this chapter, I address the distribution of negative-initial clauses and their loss. I highlight some problems with previous accounts, in particular van Kemenade (2000). Van Kemenade's account has three main aspects to it: first, the syntactic derivation of NegV1 using the Neg-criterion (see section 3.2); second, the loss of NegV1, which she relates to the introduction of secondary negators under Jespersen's Cycle (see section 3.2.1); third, the relationship between negative initial clauses in poetry and prose (see section 3.5).

3.2 Van Kemenade's (2000) analysis

Van Kemenade (2000) proposes an account which links the negative-initial clauses in prose and poetry. She argues that the negative initial patterns in *Beowulf* are linked to the negative initial patterns in later OE prose texts by a process of diachronic change. She supposes an early date of composition for *Beowulf* (7th-8th century CE), and takes *Beowulf* to represent an earlier diachronic stage. The link between clauses with initial *no* and initial *ne+V_{finite}* under van Kemenade's account is the rise of verb movement to C during early OE. To this end, she argues that *no* and *ne* are both operators in spec,CP, but their effect in triggering V to C movement is different: *ne* occurs with V to C movement while *no* does not. The hypothesised rise of V to C movement raises many problems for an analysis, which I will discuss in section 3.5.1. Not least of these is that van Kemenade hypothesises a change scenario on the basis of very little evidence, and does not take full account of other differences between prose and poetry.

She links the loss of negative initial clauses to the introduction of secondary negators at the second stage of Jespersen's Cycle (see section 1.2.2). For van Kemenade (2000), the introduction of secondary negators at stage two of Jespersen's Cycle, and the loss of NegV1 are reflexes of a single parametric change: the loss of operator status for initial *ne*. In this respect, her account differs from previous accounts of Jespersen's Cycle. Jespersen (1917) did not link the loss of negative initial clauses to his account of changes to Jespersen's Cycle, nor have previous syntactic accounts such as Frisch (1997).

Jespersen's Cycle

- Stage 1: Negation is expressed by one negative marker (OE *ne*)

(132) we ne mугen þat don
 we NEG can that do
 'We cannot do that' (CMTRINIT,103.1370)

- Stage 2: Negation is expressed by two negative markers. The negator *ne* co-occurs with a second negative marker *not*, whose position is fixed. The result is sentential negation which is bipartite: *ne...not*.

(133) I ne may nat denye it
 I NEG may not deny it
 'I may not deny it' (CMBOETH,435.C1.262)

- Stage 3: Negation is expressed by a single negative marker as *ne* is lost (ME *not*).

(134) I know nat the cause
 I know not the cause
 'I do not know the cause' (CMMALORY,627.3549)

The Old English *ne...na/no* pattern (135)-(136) is interpreted by van Kemenade (1999; 2000) as the Old English equivalent of Middle English *ne...not*. For van Kemenade (1999; 2000), *ne...na* and *ne...not* represent the same dependency at stage two of Jespersen's Cycle. The development of more than one secondary negator is also attested in French (Roberts and Roussou 2003, 156).

(135) Ne het he us na leornian heofonas to wyrce
 NEG ordered he us not learn heavens to make
 'He did not order us to learn to make the heavens'
 (Ælfric, *Lives of Saints* XVI.127, van Kemenade (2000, 64, ex.14a))

(136) Ne sæde na ure Drihten þæt he mid cynehelme oððe mid purpuran
 NEG said not our Lord that he with diadem or in purple
 gescryd, cuman wolde to us
 clothed come wanted to us
 'Our Lord did not say that he wanted to come to us with a diadem or
 clothed in purple'
 (Ælfric *Lives of Saints* XXXI.762, van Kemenade (2000, 64, ex14b))

Van Kemenade's interpretation of Old English *na* is not universally accepted (for example see van Bergen (2003)). However, in chapter 2, we saw some evidence which supports the analysis of both *na* and *not* as secondary negators. There are distributional parallels between *na* and *not* which distinguish them from other negative adjuncts: the relatively fixed position of both *na* and *not*, their distribution across clause types, and their reluctance to appear in multiple negation with negative arguments or adjuncts. Furthermore, in section 2.5 I presented some evidence consistent with the semantic bleaching of *na* as a functional negative marker rather than a lexical element.

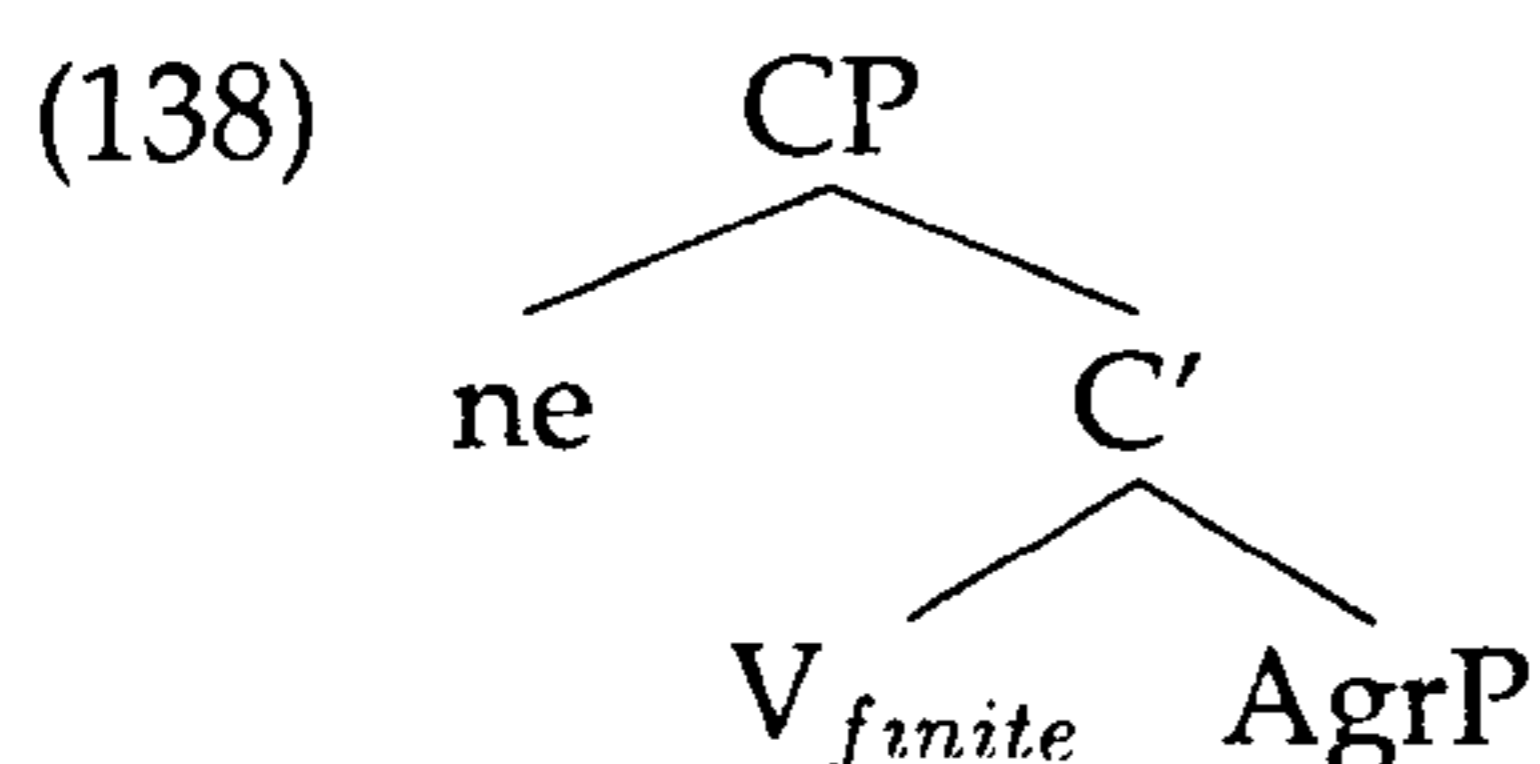
3.2.1 The Neg-criterion, NegV1 and Jespersen's Cycle

Van Kemenade appeals to the Neg-criterion (137) to derive both NegV1 and bipartite *ne...na/not* negation.

(137) **The Neg-criterion:**

- a. Each Neg X^0 must be in a spec-head relationship with a Neg operator.
- b. Each Neg operator must be in a spec-head relationship with a Neg X^0 .
- c. NEG-operator: a NEG phrase in a scope position.
- d. Scope position: a left-peripheral A'-position (i.e. XP-adjoined or Spec).
(Haegeman 1995, 106)

She analyses NegV1 as spec-head agreement between XP *ne* and a finite verb, (van Kemenade 2000, 62).²



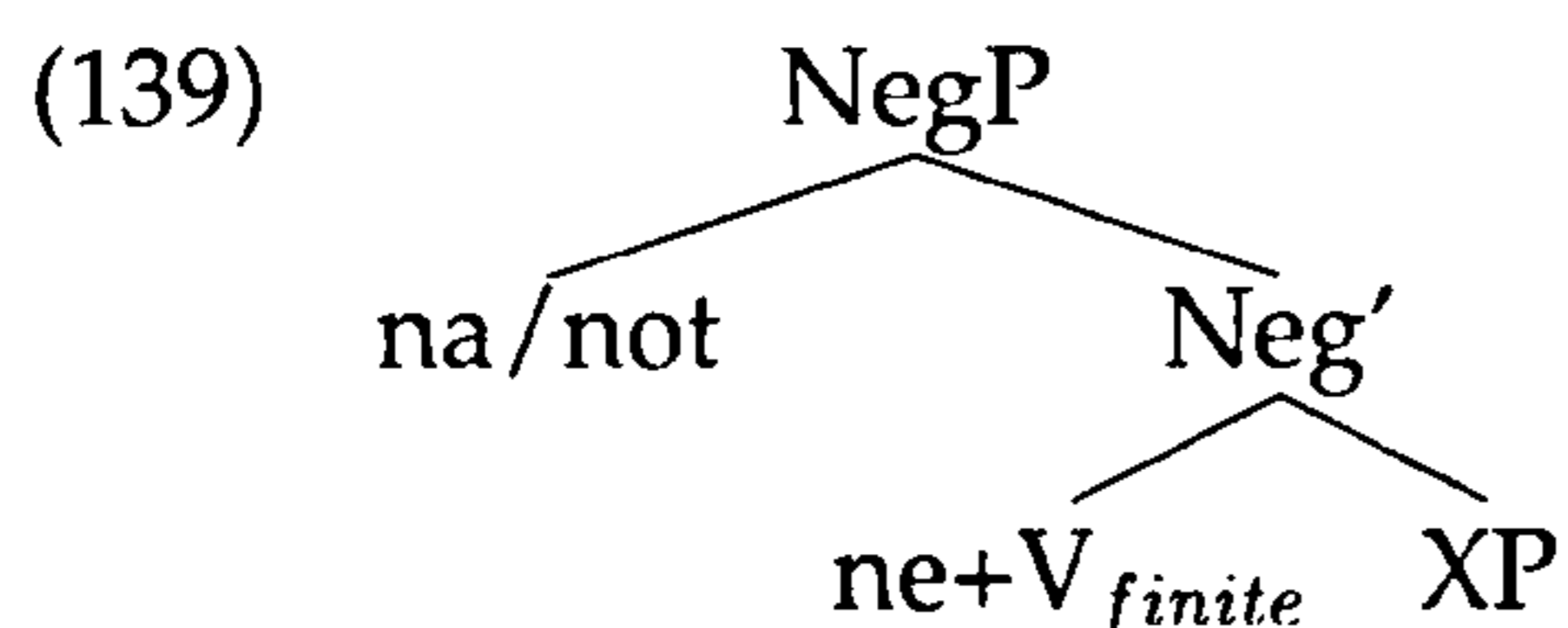
It seems reasonable to analyse the initial negative element in root clauses in Early Old English as a Spec,CP element, and to say that the finite verb, when moved, is in C. The motivation for the rise of this V-movement strategy could then plausibly come from a condition of Universal Grammar stating that an (operator) element in Spec,CP must be licensed by a lexically filled C. This kind of condition is well known

²Although it is not clear in what sense the verb is negative, sufficient to satisfy the Neg-criterion. It is not morphologically marked as negative, if *ne* is analysed as a spec,CP operator.

in the theoretical literature; one appropriate way of formulating it for English past and present is Rizzi's *Wh*-criterion (Rizzi 1990), and his adaptation of Haegeman's analogous *Neg*-criterion (Haegeman 1995). The only element that can satisfy this condition without violating the usual conditions on head movement is V...

(van Kemenade 2000, 62)

Van Kemenade (2000) follows a common analysis for bipartite *ne...not* under the *Neg*-criterion (Haegeman 1995), extending this analysis to OE *ne...na*. At stage two of Jespersen's Cycle, spec-head agreement between the spec,*NegP* operator *na/not* and *Neg*⁰ *ne* satisfies the *Neg*-criterion at *NegP*. Frisch (1997) adopts the same analysis in his account of Jespersen's Cycle in Middle English. Frisch (1997) and van Kemenade (2000) analyse bipartite *ne...not* as spec-head agreement between the head *ne* and the phrase *not* in Middle English (139). This forces the analysis of *ne* as a head in this construction.



Two points of note arise out of van Kemenade's implementation of the *Neg*-criterion. First, negative initial clauses and bipartite negation are different means of satisfying the *Neg*-criterion. Therefore they should be mutually exclusive. Second, her particular implementation of the *Neg*-criterion at CP requires *ne* to be a spec,CP operator, contrary to other accounts such as Haerberli (1991), Frisch (1997) which analyse OE and EME *ne* as a head. A prediction follows from the first point. *NegV1* should be lost as bipartite negation becomes more commonly used in Old English (*ne...na*) and Middle English (*ne...not*).

The changes which van Kemenade's analysis postulate amount to a change in the position and manner in which the *Neg*-criterion is satisfied, from CP to *NegP*. This change is contingent on reanalysis of *ne* from spec,CP operator to negative head (*Neg*⁰) proclitic on the finite verb. Loss of operator status for *ne* entails the reanalysis of the adverbials *na/not* as new negative operators in positions lower than CP. Van Kemenade argues that *ne* procliticises onto the finite verb and is reanalysed as a verbal prefix. For van Kemenade (2000) the reanalysis of *ne* as a verbal prefix arises because *ne* and the finite verb are adjacent in CP. Unlike, clauses with initial *no* which did not co-occur with V to C movement, clauses with

initial *ne+V* offer no evidence for *ne* as an independent spec,CP operator because the finite verb and *ne* are always adjacent. Van Kemenade links clause initial *no* and clause initial *ne+V* by a diachronic change: the rise of V to C movement following initial negative operators. This change is crucial in driving both the loss of NegV1 and Jespersen's Cycle as it creates structural ambiguity which leads to the reanalysis of *ne* as a syntactic head rather than an operator, and hence the development of a new negative operator in place of *ne*. The rise of V to C movement in this context alters the syntactic status of *ne*, and hence the way the Neg-criterion is satisfied in early English.

(140) Jespersen's Cycle recast (van Kemenade 2000, ex.6, 58)

Negative adverbs grammaticalise to negative head status through incorporation resulting from verb movement

As a consequence of the loss of operator *ne*, *na/not* take over the operator function previously held by clause initial spec,CP *ne*. As negative operators *na/not* satisfy the Neg-criterion, but in a lower position than the operator *ne* does. The development of a functional projection NegP is a consequence of this reanalysis, forced within an X'-theoretic approach to phrase structure, in which a separate functional projection is required within INFL to accommodate spec-head agreement under the Neg-criterion.³

According to van Kemenade, the change in (140) introduces a new structural option in late OE and early EME. Once *ne* is no longer an operator in spec,CP, a topic is free to co-occur with a negated finite verb in C⁰ (141). The link which she hypothesizes between the loss of spec,CP *ne* and the introduction of secondary negators entails that all clauses like (141) should have secondary negators.

(141) þis ne habbe ic nauht ofearned
 this NEG have I not deserved
 'I have not deserved this'
 (CMVICES1,17.192)

For van Kemenade (2000) the loss of negative initial clauses and the introduction of secondary negators are reflexes of a single parametric change. Her distinction between two types of *ne* at successive stages of Jespersen's Cycle links the loss of NegV1 with change under Jespersen's Cycle. As this claim is central

³The required feature checking configuration may be achieved without NegP in a system which allows multiple specifiers. See section 4.5.1 for a discussion of the status of NegP.

to her account, I will spend much of this chapter discussing evidence for the two distinct types of *ne* and the interaction of NegV1 and Jespersen's Cycle. To this end, I will reconsider the distribution of *ne*, seeking evidence to distinguish two different types of *ne*, and evidence for different distributions of *ne* at successive stages of Jespersen's Cycle, which follows if NegV1 and bipartite negation are alternative manifestations of the Neg-criterion. Whilst the relationship between negative-initial clauses and Jespersen's Cycle is central to van Kemenade's account, the significance of this issue extends beyond van Kemenade's account, to all accounts of negative initial clauses which invoke the Neg-criterion, including Haeberli (1991). These accounts predict the complementary distribution of negative-initial clauses and sentential negators *na/not*.

Van Kemenade's derivation of Old English negative initial clauses makes reference to two forms of *ne*, an XP operator in initial spec,CP position at stage one of Jespersen's Cycle, and a head in non-initial positions at stage two of Jespersen's Cycle. The structural analysis of *ne* and hence its position is tied to Jespersen's Cycle. If these are the only two options for *ne*, then there should be no initial *ne* at stage two of Jespersen's Cycle, and no non-initial *ne* at stage one of Jespersen's Cycle. I will show that neither of these scenarios are attested, requiring van Kemenade's account to be weakened considerably. The account she proposes relies on the idea that the spec,CP operator *ne* is lost, eliminating certain derivational options, one of which is negative-initial clauses, and another of which is the unsupported *ne* found at stage one of Jespersen's Cycle.

Previous approaches to Jespersen's Cycle did not invoke an XP>X⁰ change for *ne*. For Frisch (1997), *ne* is a negative head at both stages. Under Frisch's (1997) account, the difference between stages one and two of Jespersen's Cycle is the form of the operator which is in spec-head agreement with *ne*. At stage one it is null. At stage two it is overt *not*. His account does not link change in the form of the operator to change in its position. Similarly, a previous account of NegV1 by Haeberli (1991) did not make use of two forms of *ne*, even though he uses the Neg-criterion to account for NegV1.

3.2.2 The positions available to *ne*: distributional evidence for two forms of *ne*

This section will examine van Kemenade's (2000) account of negative initial clauses in Old English prose. Proposals by van Kemenade (2000) make reference to two

forms of *ne* at successive stages of Jespersen's Cycle: a head or prefix on the finite verb, and a phrase in a specifier position.

It seems that V-movement to C, with the negative element in spec,CP, entails that *no* is reduced/procliticised to the finite verb. I hypothesize that... this cliticization is phonological, which means that, although *ne* is a prefix/proclitic, it does represent a constituent in Spec,CP... (van Kemenade 2000, 63)

I aim to determine whether the analysis of Old English needs to make reference to both these forms or whether one is sufficient to account for the distribution of *ne* in Old and Middle English.

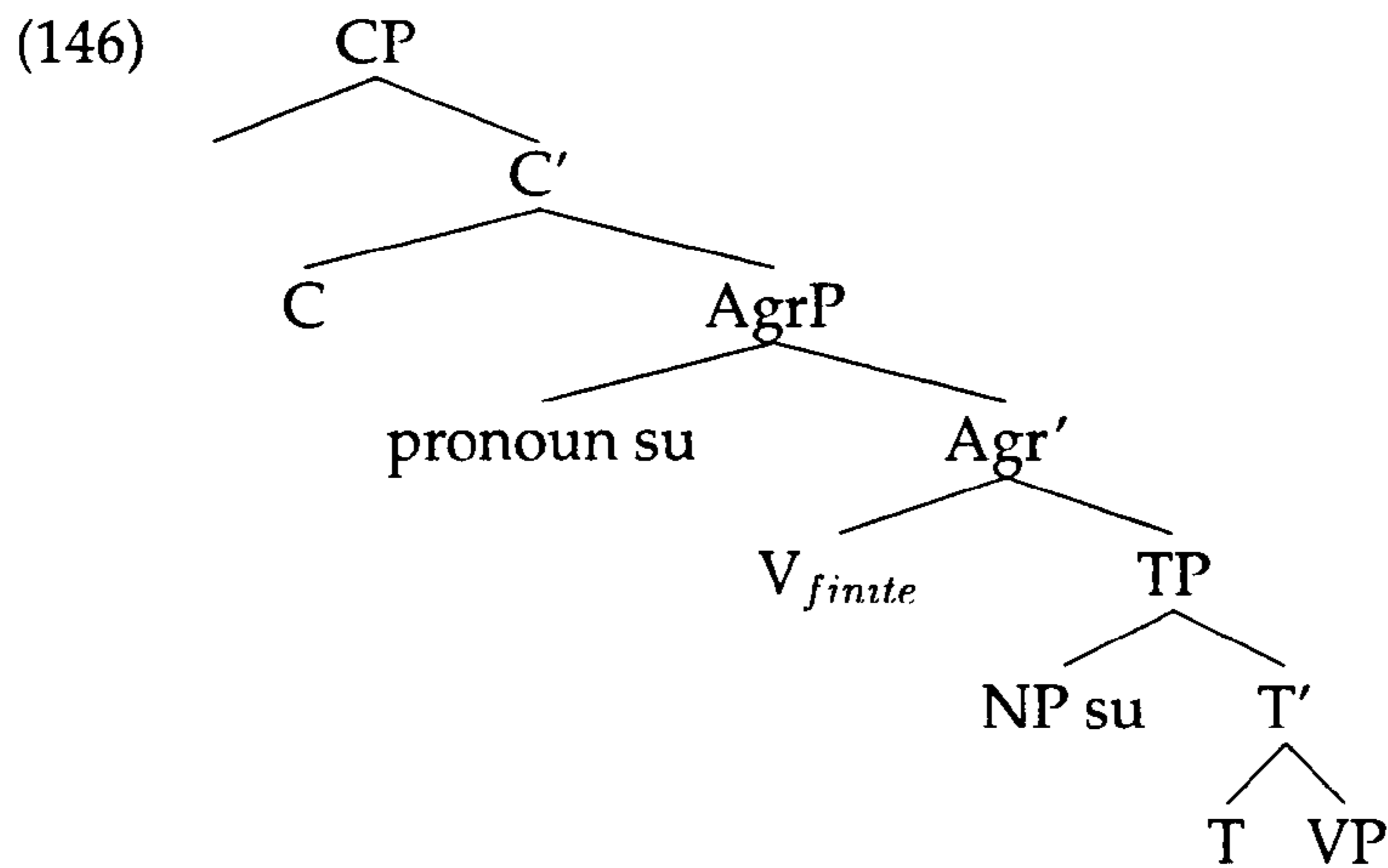
The predominant position for *ne* in main clauses throughout the Old English period is clause initial position (142-143). Negated finite verbs precede subject pronouns, indicating that V to C movement has taken place (Pintzuk 1999, van Kemenade 1997a; 2000).

- (142) Ne brohte we nan þing to þysum middanearde
 NEG brought we no thing to this world
 'We did not bring anything to this world'
 (cocathom1,+ACHom_I,_18.323.188.3595)
- (143) Ne forgife ic eow swa swa ðes middanearð forgifð
 NEG forgive I you as the world forgives
 'I do not forgive you as the world forgives'
 (coaelhom,+Ahom_10:15.1413)

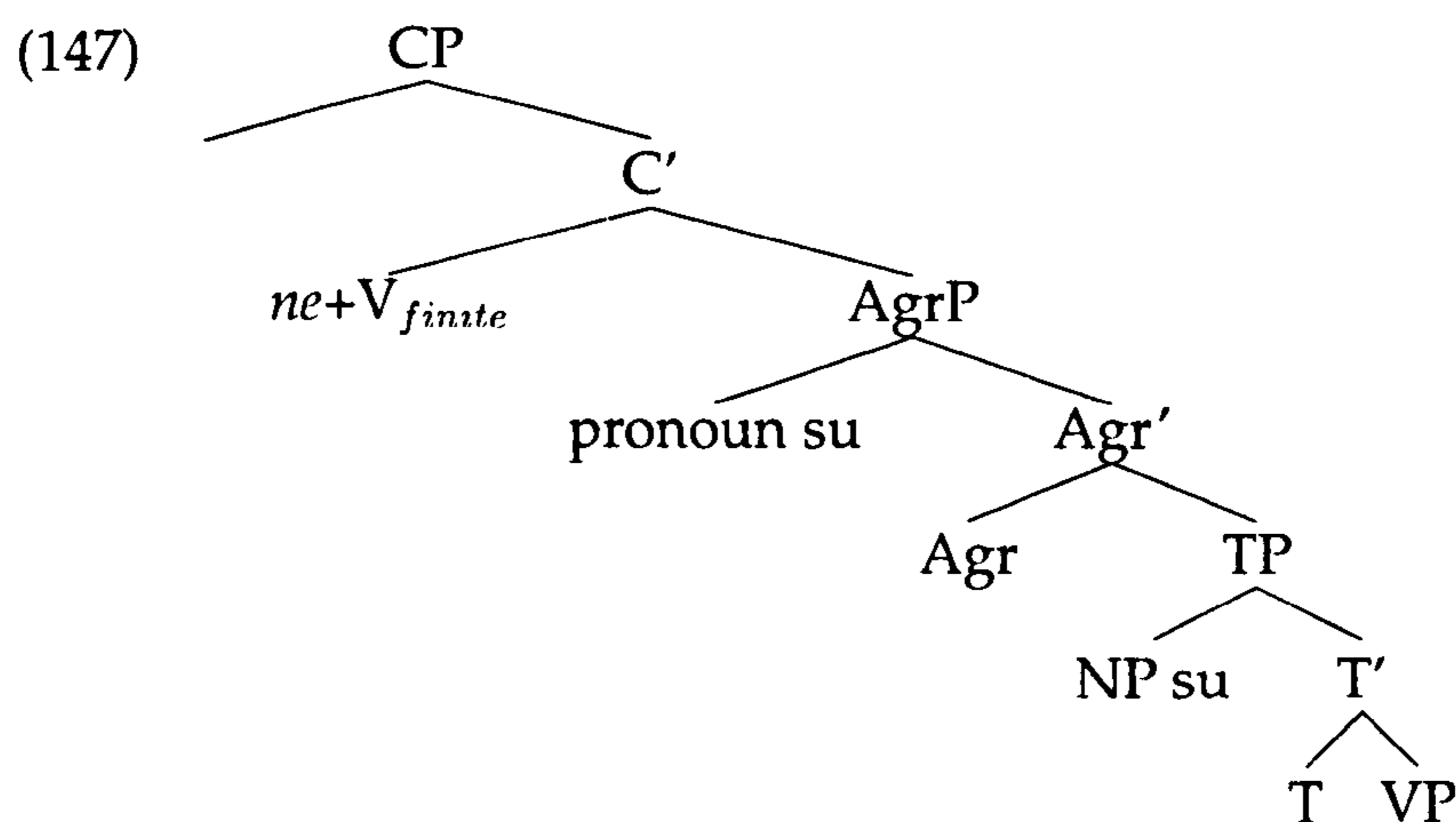
The clause structure I assume for Old English main clauses is given in (146), and follows Haeberli (2001; 2002b), see section 2.2.2 for more detailed discussion. Under this analysis, Old English has separate Tense and Agreement heads within INFL. In positive declarative main clauses without an initial operator, the finite verb moves to Agr⁰. So, in clauses with non-subject topics, finite verbs typically precede full NP subjects (144) and follow pronoun subjects (145). The split-INFL analysis captures the different position of subject pronouns (in spec,AgrP) and full NP subjects (in spec,TP) relative to the finite verb in Agr⁰.

- (144) þinre meder geheolp þin halga geleafa
 your mother helped your holy faith
 'your holy faith helped your mother'
 (Aelfric's Lives of Saints, I,212.28, Haeberli (2002c, 1, ex.1b))

- (145) þæt þu meah̄t swiðe sweotole ongitan
 that you can very easily understand
 'You can very easily understand that'
 (Boethius, 88.14, Haeberli (2002c, 2, ex.2a))

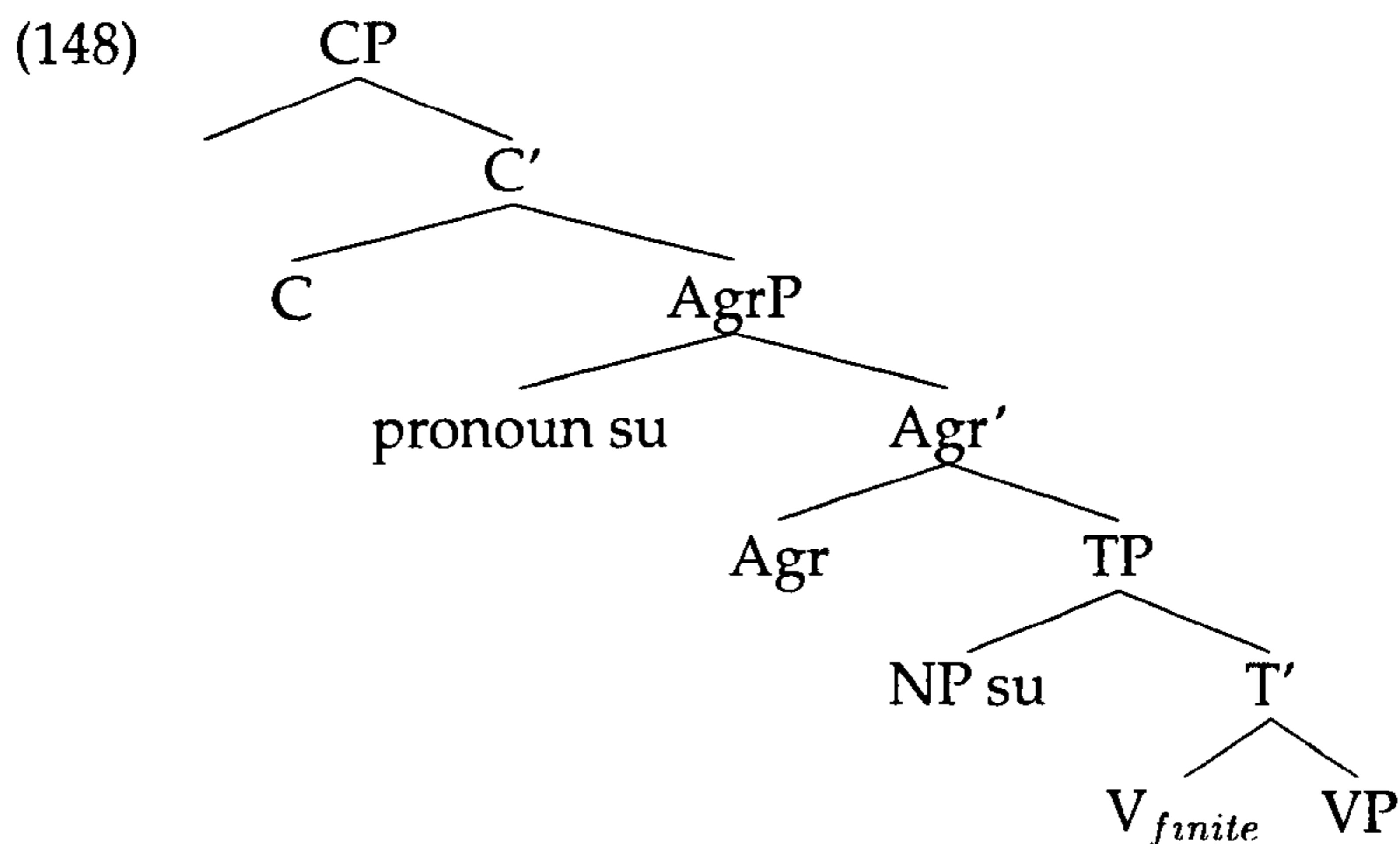


Many clauses with negated finite verbs do not show this asymmetry between NP subjects and pronoun subjects, indicating the finite verb has moved to a functional head higher than the position of the pronoun subject (spec,AgrP). Hence these clauses (142) have V to C movement (147). The finite verb is higher than subject pronouns and subject NPs. Van Kemenade (2000) makes the point that clause initial *ne* is ambiguous between a prefix on the finite verb in C⁰ (as I have it in (147)), or a phrasal spec,CP element.



In OE subordinate clauses, the finite verb occupies the same position in clauses with *ne* and without *ne*. The presence of *ne* has no effect on the position of the finite verb in subordinate clauses. Unlike main clauses with *ne*, subordinate clauses with *ne* do not show subject-verb inversion with pronoun subjects. C⁰ is unavailable as a target for verb movement in subordinate clauses. It is occupied

by a complementiser or subordinating conjunction. Furthermore, Haerberli (2001) observes that there is no inversion of finite verb and subject NPs in subordinate clauses. On this basis, he argues that the target of verb movement in subordinate clauses is lower than in main clauses. He claims that subordinate clauses have verb movement to T^0 not to Agr^0 .



3.2.3 Adjacency of *ne* and the finite verb

Almost all instances of *ne* in the YCOE are adjacent to the finite verb (Table 3.3). (149) shows one of the exceptions which were discussed in section 2.3.1.1. The principal reason for analysing *ne* as a syntactic head is this adjacency with the finite verb, which is seen irrespective of the position of the finite verb after verb-movement:

In the Old English found in the prose texts of the ninth and tenth centuries, sentential negation is dominantly expressed by the negative marker *ne*, which immediately precedes and is often procliticised to the finite verb, whatever the position of the latter. . . . This is sufficient motivation for regarding *ne* as the (incorporating) head of NegP, allowing us to see the positional co-variance of *ne* with the finite verb as an instance of head incorporation.

(van Kemenade 2000, 57)

- (149) uton ne forlætan gyet ðas boc...
 Let NEG neglect any longer the book
 'Let us neglect the book no longer'
 (cosolilo, Solil₁:50.14.645)

Clause	<i>ne</i> adjacent to Vf	<i>ne</i> elsewhere	TOTAL	% adjacent to Vf
Main	7492	12	7504	99.8%
Subordinate	7988	7	7995	99.9%

Table 3.3: The distribution of *ne* relative to the finite verb in the YCOE.

Even at stage one of Jespersen's Cycle, all examples of *ne* are adjacent to the finite verb whether the finite verb is in Agr (150, 151), in T (152,153), or in C (154, 155), and irrespective of the headedness of INFL (Pintzuk 1999). Examples of I-medial and I-final main clauses are shown in (150) and (151). (152) is an example of an I-medial subordinate clause, (153) an example of an I-final subordinate clause.

- (150) ic ne mæg hit nu swa hraðe asingan
 I NEG can it now so quickly sing
 'I cannot sing it so quickly now'
 (coboeth,Bo:39.127.29.2536)
- (151) ic geseon ne mæg
 I see NEG can
 'I cannot see'
 (coelive,+ALS_[Swithun]:204.4357)
- (152) Gif þu nelle me ofslean, asend me to þam casere...
 If you NEG-intend me to-kill, send me to the emperor...
 'If you do not intend to kill me, send me to the emperor...'
 (coelive,+ALS_[Julian_and_Basilissa]:207.1066)
- (153) þæt he deap þrowigan ne scile
 that he death endure NEG shall
 'that he shall not endure death'
 (coverhom,HomS_24_[ScraggVerc_1]:115.121)
- (154) þonne ne mæg he noht geseon
 then NEG can he nothing see
 'then he can see nothing'
 (cocura,CP:11.69.17.448)
- (155) Ne brohte we nan þing to þysum middanearde
 NEG brought we no thing to this world
 'We did not bring anything to this world'
 (cocathom1,+ACHom_I,_18.323.188.3595)

ne occurs in three positions: adjacent to a finite verb which is in Agr⁰, adjacent to a finite verb which is in T⁰ and adjacent to a finite verb which is in C⁰. Is *ne* the same lexical item, with the same syntactic status in all these positions?

The position of *ne* is clearly contingent on head (V-) movement at least when V moves to Agr or T. In these instances, the position of *ne* varies according to the position of the finite verb. Therefore *ne* must be a head or a prefix on the finite verb. This analysis could be extended to deal with clause initial *ne+finite verb*, but further analysis is required to provide a rationale for movement of the finite verb to C⁰ in these instances.

Examples of non-initial *ne* whose position is covariant with the finite verb (150-153) indicate that *ne* is a head in some instances even in OE. In order to reconcile these examples with van Kemenade's analysis, there must be two forms of *ne* at stage one of Jespersen's Cycle, one a phrase (clause initially in spec,CP), the other a head which is part of the finite verbal morphology, *ne* cannot be an operator in all contexts at stage one of Jespersen's Cycle. This fact has important implications. There is the question of how the Neg-criterion is satisfied in clauses with head *ne*. A null operator is required, yet postulating the null operator has implications for van Kemenade's account. Allowing the null operator in cases where *ne* is non-initial, begs the question of why a similar analysis cannot be extended to clauses with initial *ne+V*, with a null operator in spec,CP triggering movement of *ne+V* to C⁰. An analysis in which *ne* is a head everywhere is simpler than one which posits both phrase and head *ne*.

Van Kemenade (2000) acknowledges the need for a negative head to account for the distribution of non-initial *ne*, arguing that *ne* in low positions develops via early Old English reanalysis of *ne* from operator to head of NegP. Adjacency of *ne* and the finite verb demonstrates that there is very little evidence for operator *ne* in my Old English prose data in non-initial position, even at the earliest period. Such evidence might take the form of independence in the position of *ne* and the position of the finite verb. For all but 19/1449 instances, the position of *ne* is contingent on verb movement. This evidence is more problematic to her account than van Kemenade acknowledges. In order to meet the Neg-criterion in clauses where head *ne* is the only negator, a null operator is required. Admitting the existence of such an operator undermines van Kemenade's link between NegV1 and Jespersen's Cycle. The development of head *ne* in non-initial positions (including subordinate clauses) does not lead to the introduction of a secondary negator under Jespersen's Cycle as in her proposed reanalysis of initial *ne*. The reasons

for this difference between developments in initial and non-initial positions is unexplained.

Van Kemenade's account of Jespersen's Cycle does not address the motivation for the introduction of bipartite negation in instances where the structural analysis of *ne* does not change from operator to head, such as in subordinate clauses. In these instances there is no evidence that head *ne* arises out of Jespersen's Cycle in the way van Kemenade proposes. In these clauses *ne* is not an operator at stage one of Jespersen's Cycle, in the sense required by Haegeman's Neg Criterion. Distributional evidence indicates that *ne* in these clauses is a head, hence the introduction of *na/not* as a negative operator cannot be a consequence of loss of operator status for *ne* as van Kemenade proposes for negative inversion clauses. She suggests that the developments affecting initial *ne* and non-initial *ne* are independent. It is not clear what the implications are for Jespersen's Cycle in clauses without negative inversion. Subordinate clauses are particularly problematic in this regard. Van Kemenade's proposed change from operator to head *ne* does not account for the introduction of secondary negators in all clauses.

If we are to pursue van Kemenade's analysis, we have to admit, as she does, that there are two types of *ne* available at stage one of Jespersen's Cycle, one a head and the other a phrase. Only clause initial *ne* (155), and those examples of *ne* not adjacent to the finite verb (149) are structurally ambiguous between XP and X⁰, and then only at stage one of Jespersen's Cycle. All instances of *ne* in the *ne...na* or *ne...not* constructions must be heads if bipartite negation is analysed as spec-head agreement within NegP. The reanalysis of *ne* in clause initial position discussed by van Kemenade has the effect of eliminating a phrasal option for *ne* in which *ne* is an operator. It is not the only means by which the head *ne* (Neg⁰) comes into existence. Change under Jespersen's Cycle removes the structural option to analyse clause initial *ne* as a phrase occupying spec,CP.

My aim here is to test the evidence for two types of *ne* at successive stages of Jespersen's Cycle. Should *ne* be considered a head throughout OE and EME, and movement of *ne*+V_{finite} extended to stage one of Jespersen's Cycle to account for negative inversion at that stage in the same way as at later stages, or is a distinct form of *ne* justified for the analysis of negative-initial clauses? Van Kemenade puts forward two lines of argument for a spec,CP operator *ne*, both arguments from syntactic change: the interaction of NegV1 and Jespersen's Cycle, and the relationship between the patterns in prose and poetry which she argues is a diachronic one. I discuss the interaction of NegV1 and Jespersen's Cycle, using this

as an argument against van Kemenade's particular analysis of NegV1 using the negative operator *ne*, but also against analyses which take both NegV1 and bipartite negation to be both manifestations of the Neg-criterion (section 3.3). Section 3.5 examines the relationship between negative initial clauses in prose and poetry.

3.3 The interaction of NegV1 and Jespersen's Cycle

3.3.1 NegV1 and Jespersen's Cycle: quantitative evidence

Some predictions follow from van Kemenade's analysis of clause initial *ne*. If van Kemenade (2000) is right, there should be visible change in the distribution of *ne* between stages one and two of Jespersen's Cycle. Different structural analyses for *ne* are available at the two stages which necessitate different derivations of *ne* at the two stages, spec,CP operator at stage one and head at stage two, and will correspond to differences in the position of *ne*. Van Kemenade's (2000) account of *ne* as a spec,CP operator relies crucially on the complementary distribution of NegV1 and bipartite negation which she does not demonstrate.

Here, I argue that the predicted complementarity between NegV1 and Jespersen's Cycle does not hold. I show that the overall distribution of *ne*+finite verb in initial and non-initial positions does not differ in clauses with and without secondary negators *na* and *not* in the way van Kemenade's account predicts. Differences are expected as van Kemenade's account requires different structural options and syntactic processes to derive negative inversion at the first and second stages of Jespersen's Cycle.⁴ Recall that negative inversion is derived by spec-head agreement between the negative operator *ne* and a finite verb⁵ at stage one of Jespersen's Cycle, but by movement of a negated finite verb *ne*+*V_{finite}* to C⁰ at stage two. At stage two of Jespersen's Cycle, negative inversion cannot be derived in the same way as NegV1 at stage one of Jespersen's Cycle, once the operator *ne* in spec,CP is eliminated. Change under Jespersen's Cycle presupposes concurrent loss of a phrasal option for *ne*. A lower frequency of clause initial *ne* is thus expected at stage two than at stage one of Jespersen's Cycle.

⁴This distribution is a problem for all approaches which derive NegV1 and bipartite negation using the Neg-criterion.

⁵A further problem of this account is that it is not obvious how the finite verb counts as a negative head for the purposes of the Neg-criterion. Negation is not morphologically marked on the verb if we accept van Kemenade's analysis of *ne* as a spec,CP operator.

This section compares the frequency of clause initial *ne* when *ne* is unsupported and when *ne* co-occurs with *na* or *not*. I will show that the frequency of clause initial *ne* in clauses with and without secondary negators does not support van Kemenade's analysis.

I examine the incidence of (156) which has clause initial *ne* in CP, preceding a subject pronoun in spec,AgrP. This is the context where the status of *ne* is indeterminate between spec,CP and a prefix on the finite verb in C⁰. Confining the investigation to *ne+Vf* preceding a subject pronoun ensures that all clause initial *ne* are in CP rather than in lower positions. The subject pronoun marks the boundary between CP and lower positions (Pintzuk 1999, Kroch and Taylor 1997, van Kemenade 1997a; 2000, Haeberli 2002b). I exclude second conjuncts from the investigation as these typically do not show movement of the finite verb to C⁰ in clauses with *ne* (in the YCOE data the frequency of inversion with a subject pronoun in second conjuncts is 44/701 or 6%). The database includes only morphologically marked indicative verbs, for reasons discussed in section 3.1. Those verbs which are subjunctive or those which the morphology does not disambiguate as indicatives are excluded.

The order (156) is compared with non-initial *ne+Vf* in which *ne* is the unambiguously proclitic head Neg⁰ (157, 158).

(156) *ne+Vf* - su pro ...

(157) Topic - *ne+Vf* - su pro...

(158) Su pro - *ne+Vf* ...

The distinction is between clause initial *ne* where there is a potential specifier position to host phrasal *ne*, and other instances of *ne* adjacent to a finite verb where there are no suitable specifier positions to host phrasal *ne*. In these positions *ne* is unambiguously a head. Structurally ambiguous phrase/head *ne* is distinguished from structurally unambiguous head *ne*. For further discussion of this distinction between initial and non-initial *ne*, see section 3.2.3.

The distribution of *ne* across initial and non-initial contexts does not differ significantly across the three OE periods (850-1150), but declines in early ME (1150-1250).

Next, I distinguish the positions of *ne* when it is unsupported (159, 160) and when it appears with a secondary negator (161, 162).

(159) Ne sprycð he of him sylfon
NEG speaks he of him self

Period	Ne+Vf initial	ne+Vf elsewhere	Total
850-950	148 (58%)	107 (42%)	255
950-1050	351 (54%)	300 (46%)	651
1050-1150	67 (51%)	64 (49%)	131
1150-1250	17 (35%)	31 (65%)	48

Table 3.4: The distribution of *ne* in in OE non-conjoined main clauses with subject pronouns. Morphologically marked indicative verbs only.

'He does not speak of himself'

(cowsgosp,Jn_[WSCp]:16.13.7081)

(160) ic geseon ne mæg

I see NEG can

'I cannot see'

(coaelive,+ALS_[Swithun]:204.4357)

(161) Ne leofað na se mann be hlafe anum

NEG lives NA the man by bread alone

'Man does not live by bread alone'

(CathHomI.+ACHom_I,_11:267.50.2038)

(162) ðu ne miht heom na of þissere stowe lædan

you NEG can him NA from this place lead

'You cannot lead him from this place'

(corood,LS_5_[InventCrossNap]:542.573)

I follow van Kemenade (2000) in assuming that both *na* and *not* are secondary negators and their appearance represents stage two of Jespersen's Cycle. At stage two, the secondary negator for Old English (850-1150) is *na/no* (van Kemenade 1999; 2000). For Early Middle English (1150-1250) it is *not* (Haeberli and Ingham 2003). Instances of *na/not* which are potentially used as adverbial modifiers (163) and (164) or quantifiers (165), or with constituent scope (166) are not counted as secondary negators.

(163) Nis hit him no swa longe alefed swa þe þinð
NEG-is it him not so long granted as you think

'it is not granted to him for so long as you think'

(coboeth,Bo:38.117.6.2330)

(164) We ne durran gelencgan na leng þysne traht

WE NEG dare lengthen no longer this text

'We dare not make this text any longer'

(coaelhom, +AHom_6:367.1053)

- (165) Ne sind Godes frynd na feawa
 NEG are God's friends not few
 'God's friends are not few'
 (cocathom2,+ACHom_II,_40:301.58.6853)
- (166) Nis þis na gesæd be manna sawlum, ac be manna lichaman...
 NEG-is this not sated by men's souls but by men's bodies
 'This is not sated by men's souls but by men's bodies'
 (coaelive,+ALS[Ash_Wed]:27.2717)

Contexts in which *ne* occurs in multiple negation with other negative phrases are excluded from Table 3.5 (167). Frisch (1997) argues for a distinction between *ne* in multiple negation and *ne* as a sentential negator at stages one and two of Jespersen's Cycle. Without further work on the syntax of multiple negation (see chapter 6), it is unclear exactly how *ne* in multiple negation fits into Jespersen's Cycle or what the syntactic status is of *ne* in multiple negation. These examples are not crucial to my argument so I will leave them aside.

- (167) Ne brohte we nan þing to þysum middanearde
 NEG brought we no thing to this world
 'We did not bring anything to this world'
 (cocathhom1,+ACHom_I,_18.323.188.3595)

This leaves the following types of examples under examination in Table 3.5. (168) and (169) are the orders compared at stage one of Jespersen's Cycle. (170) and (171) are the orders compared at stage two of Jespersen's Cycle. The two stages of Jespersen's Cycle overlap during Old and Middle English as part of an ongoing change. They are separated here for the purposes of analysis.

- (168) Ne sprycð he of him sylfon
 NEG speaks he of him self
 'He does not speak of himself'
 (cowsgosp,Jn_[WSCp]:16.13.7081)
- (169) ic geseon ne mæg
 I see NEG can
 'I cannot see'
 (coaelive,+ALS_[Swithun]:204.4357)
- (170) Ne leofað na se mann be hlafe anum
 NEG lives NA the man by bread alone
 'Man does not live by bread alone'
 (CathHomI.+ACHom_I,_11:267.50.2038)

- (171) *ðu ne miht heom na of þissere stowe lædan*
 you NEG can him NA from this place lead
 'You cannot lead him from this place'
 (corood,LS_5_[InventCrossNap]:542.573)

Period	ne			ne...na/ne...not			Total		
	Initial	Total	%	Initial	Total	%	Initial	Total	%
850-950	55	123	45%	33	43	77%	88	166	53%
950-1050	225	440	51%	63	90	70%	288	530	54%
1050-1150	30	58	52%	16	27	59%	46	85	54%
1150-1250	0	2	–	8	23	35%	8	25	32%

Table 3.5: The position of *ne* when *ne* is unsupported and when it co-occurs with OE *na* or ME *not*. Morphologically indicative verbs only.

In Table 3.5, the position of *ne* when it is unsupported is contrasted with the position of *ne* accompanied by OE *na* or ME *not*. Throughout Old English periods (to 1150) we see that the frequency of NegV1 is actually higher in clauses with *na* than in clauses without *na*, contrary to the predictions of van Kemenade's analysis. Table 3.5 indicates that the use of secondary negators *na/not* is independent of the position of *ne* in the clause in a way that does not fit with van Kemenade's account, which asserts that NegV1 and the secondary negators *na/not* are structurally incompatible.

Early Middle English (1150-1250) does not show any link between the loss of NegV1 and the introduction of *not*. *not* and NegV1 co-occur. I draw two conclusions from this distribution. First, NegV1 and bipartite *ne...na/not* negation must be structurally compatible and able to co-occur. Therefore, deriving NegV1 and *ne...na/ne...not* as different instantiations of the Neg-criterion does not capture the independence of these two phenomena. The predicted difference in NegV1 between clauses with *ne...na/ne...not* and those with unsupported *ne* is not found. Second, this fact does not support an analysis in which *ne* in clauses without *na* or *not* and *ne* in clauses with *na* or *not* are different syntactic entities in the way van Kemenade proposes. The lack of the predicted distinction in the frequencies of NegV1 in clauses with and without *na* argues against two different forms of *ne* in either OE or EME, but instead supports the view that there is one derivation of negative initial clauses in OE and EME irrespective of the occurrence of *na* or *not*. Of course Table 3.5 raises the question of why *na* should be more frequent in NegV1 clauses than elsewhere, which I will leave for future work.

Van Kemenade (2000) asserts that the development of bipartite *ne...na* is a reflex of the change from phrase *ne* to head *ne* which also eliminates negative-initial clauses. The data presented here do not bear out the correlation between loss of NegV1 and the introduction of *na* or *not*.

... the fact that at a later stage a topic is readily tolerated in this construction is accounted for by assuming that the constituent status of *ne* in spec,CP is weakening, and that therefore it ceases to be interpreted syntactically as a topic. A crucial intermediate step in this weakening process is the introduction of a reinforcing negator in spec,NegP which supposedly marks the weakening of the original negator. (van Kemenade 2000, 67).

The quantitative data presented in this section argue against linking a change in the distribution or syntactic status of *ne* to the introduction of *na* or *not*. If there is a change from $XP > X^0$ *ne*, there is no overt evidence for it in my Old English prose data. The overall distribution of *ne* in my quantitative data provides no evidence for any change in the distribution of *ne* until Early Middle English, at which time the use of *not* in main clauses is well advanced.

The change from operator to head *ne* proposed by van Kemenade may antedate the earliest Old English prose data I have looked at, or there may have been no such change. Under the syntactic analysis of Jespersen's Cycle van Kemenade adopts, the availability of phrase *ne* should not be independent of Jespersen's Cycle, but tied to it in a very particular way. The interaction of NegV1 and Jespersen's Cycle illustrates that NegV1 is not restricted to clauses in which van Kemenade analyses *ne* as a spec,CP element. Quantitative data provide no empirical support for this idea. I have demonstrated independence of change in the position of *ne* and the incidence of *na/not* which undermines the motivation for distinguishing two types of *ne* (XP *ne* and X^0 *ne*) in OE and EME clauses with and without *na/not*. More importantly, it undermines an account of both NegV1 and OE and EME *ne...na/ne...not* as manifestations of the Neg-criterion. In clauses with NegV1 and *na/not* the derivation of NegV1 and the dependency between *ne* and *na/not* must be independent.

Throughout, I have assumed that *na* and *not* are secondary negators rather than negative adjuncts, for reasons I presented in section 2.5. However, if *na* and *not* are adjuncts rather than secondary negators then they will not constitute a competing means to satisfy the Neg-criterion, and will be free to co-occur with

NegV1. This is consistent with the distribution shown in Table 3.5.⁶ The intersection of NegV1 and bipartite forms of negation question the assumption that OE *na* and EME *not* are secondary negators. The Neg-criterion approach to NegV1 and bipartite negation forces an account in which the loss of NegV1 is a precondition for the reanalysis of *not* as a secondary negator. This is not borne out by the data in Table 3.5. Accepting these data we might argue that all EME *not* are adverbs, but this provides a very late date for the development of the sentential negator *not*, by which time *not* already appears in 23/25 or 92% of clauses with indicative verbs in the period 1150-1250 (figures based on Table 3.5). This is an anomalously high frequency for adverbial *not*, but rather indicates grammaticalisation of *not* in this context is nearly complete. Therefore, we need an account of NegV1 and bipartite negation which allows the two phenomena to co-occur each independently of the other. The Neg-criterion approaches of either van Kemenade (2000) or Haeberli (1991) fail to reconcile evidence for the co-occurrence of NegV1 and *na/not* in OE and EME with the independent distributional evidence for analysing *na/not* as a secondary negator discussed in section 2.5.

On the basis of the evidence presented here, I conclude that the loss of NegV1 is independent of the introduction of secondary negators, contrary to van Kemenade's analysis. Furthermore, this independence undermines the distinction between the two types of *ne* which van Kemenade postulates.

3.3.2 The loss of NegV1 and the availability of the spec,CP position

One argument which van Kemenade (2000) presents for *ne* being a phrase in spec,CP in Old English is the restricted occurrence of (172). This restriction follows from her account of *ne* as a spec,CP operator. The spec,CP position is not available to host a topic in these clauses. (172a) is one of the few Old English examples with an NP topic (n=8, see Table 3.7). (172b) and (172d) represent the more frequently attested Early Middle English examples with NP topics.

(172) Topic - *ne+Vf* - *su pro* ...

- a. Drihten, þine rihtwisnyse ne behidde ic an minre heortan
 Lord, your righteousness NEG hide I in my heart

⁶See also Haeberli (1991) for a similar argument against analysing OE *na* as a secondary negator.

- 'Lord, I do not hide your righteousness in my heart'
(cochrdrul,ChrodR₁:79.45.967)
- b. Ðis ne dede ic næure
This NEG did I never
'I never did this'
(CMVICES1,13.144)
- c. þis ne habbe ic nauht ofearned
this NEG have I not deserved
'I have not deserved this'
(CMVICES1,17.192)
- d. þet ne seide he noht
That NEG said he not
'He did not say that'
(*Kentish Sermons* 214.25, van Kemenade (2000, 68, ex.22a))

She argues that this increase follows from the change in the status of *ne* XP>X⁰ under Jespersen's Cycle which has the consequence of freeing up spec,CP for topic (cf. (173) and (174)). Therefore, the increase in topics in clauses with negative inversion should correspond to the increased use of *na/not* as sentential negators (172c, 172d).

(173) [_{CP} ne [_C V_{finite} [_{AgrP} subject pronoun ...]]]

(174) [_{CP} NP [_C ne+V_{finite} [_{AgrP} subject pronoun ...]]]

In (172b-172d), spec,CP is not available to host a negative operator, so the Neg-criterion cannot be held responsible for inversion of finite verb and subject pronoun. It is not clear exactly how this type of inversion following a non-negative spec,CP constituent is derived. These clauses are not amenable to analysis under the Neg-criterion in the same way van Kemenade proposes for clauses with initial *ne*, in which she claims that *ne* is a spec,CP operator triggering verb movement to C (173). Topics in spec,CP are not operators, and are not necessarily negative (172b-172d).

Van Kemenade (2000) seeks to link the increased appearance of topics in clauses with inversion to a structural difference between negative clauses in Old and Early Middle English. In (173), *ne* is necessarily clause initial, an operator in spec,CP. In (172) *ne* is a head. Indeed, under van Kemenade's assumptions the negative head cannot be initial, as movement of head *ne* to clause initial position cannot be motivated. For van Kemenade, *ne* is only initial when it is a spec,CP

operator. For van Kemenade (2000), the syntactic status of *ne* is different at the two periods. In Old English *ne* is a phrase in spec,CP, hence no position is available to host topics. In Early Middle English, *ne* is a clitic on the finite verb in C⁰, hence the spec,CP position is available for topics. This difference requires different inversion strategies to apply to the two types of *ne* (173), (174). Loss of operator *ne* from spec,CP means that the Neg-criterion no longer holds at CP. It follows from van Kemenade's analysis that the Neg-criterion will apply at NegP in these clauses between the head *ne* and an overt negative operator *na* or *not*, and that inversion following a spec,CP topic cannot be due to the Neg-criterion.

It is not clear why the position of the negated finite verb in (172d) is higher than the position of the finite verb in the non-negative declaratives with NP topics. Van Kemenade's account does not really address this issue. In order to derive inversion in these clauses a different mechanism and different rationale is required for V to C movement in clauses with initial negatives and initial NPs. Van Kemenade claims that the availability of this new type of inversion is linked to the loss of operator *ne*, and therefore also to the introduction of bipartite negation under Jespersen's Cycle. If the structural option in (172) arises as a consequence of the loss of NegV1, all clauses like (172) should have bipartite forms of negation. It is clear that *ne* must be a head in clauses which have the structure (172). For example take (172d). *ne* follows an NP which occupies the spec,CP position. It follows that *ne* is a head because there is no specifier position between spec,CP and the finite verb for *ne* to occupy (172).⁷

Van Kemenade's account implies that the incidence of (172) should increase in parallel with the change under Jespersen's Cycle which frees up spec,CP as a host for topics. Table 3.6 shows that both changes advance in Early Middle English. However, the introduction of spec,CP elements in negative inversion clauses does not correlate very precisely with the frequency of *na/not* as operators despite the fact that both increase in Early Middle English.

I include initial adverbs and PPs as well as NPs under the label 'Topic' in Table 3.6. As van Kemenade (2000) observes, some initial adverbs and PPs may be adjoined to CP rather than topics in spec,CP. Certain adverbs such as *þa*, *þonne* 'then' systematically trigger inversion in OE and ME prose, so should be excluded from the discussion. Therefore, I present the data for NP topics in clauses with neg-

⁷This is the situation which follows from van Kemenade's assumptions. However, if we assume an articulated CP structure, or the possibility that C⁰ has multiple specifiers, these claims do not necessarily follow.

Period	Jespersen's Cycle			ne V su pronoun		
	stage 2	Total	% stage 2	XP neV su	TOTAL	% XP neV
850-950	131	778	17%	61	450	14%
950-1050	284	2818	10%	172	1465	12%
1050-1150	119	675	18%	60	389	15%
1150-1250	357	541	66%	59	243	24%

Table 3.6: The changes under Jespersen's Cycle and the availability of topics. Figures showing the distribution of *na* are from Table 2.7. Figures showing the overall distribution of EME *not* are from PPCME2. All verbs are included irrespective of marking for mood.

ative inversion separately in Table 3.7. These are non-subject argument topics which have moved to spec,CP. The totals column in Table 3.7 includes all negative inversion clauses with a non-subject argument.

Period	Negative inversion clauses		
	Topic	Total	% topic
850-950	1	98	1%
950-1050	5	411	1%
1050-1150	2	75	3%
1150-1250	7	22	32%

Table 3.7: The distribution of NP topics in clauses with inversion of finite verb and subject pronoun and a non-subject NP argument.

Initial topics do not generally trigger V to C movement in Old or Middle English positive declaratives, where inversion of the finite verb and a subject pronoun indicate V to C movement has occurred (Pintzuk 1999, Haerberli 2002b). It is unclear why these initial elements should co-occur with inversion of *ne+V_{finite}* and a subject pronoun if they are topics. Haerberli (2002c) and Kroch and Taylor (1997) show that inversion of a subject pronoun and finite verb is possible following a non-subject NP topic in positive clauses. However, the frequency of this inversion following a non-subject NP is put at only 5% for EME by Kroch and Taylor (1997), too low to account for all instances of inversion following non-subject NPs in clauses with *ne*. In 1150-1250 there are 10 examples with initial non-subject NPs, pronominal subjects and negated finite verbs. 7/10 exhibit inversion of the finite verb and the subject. V to C movement in this context differs from NegV1 and must represent a different pragmatic strategy, perhaps focalisation of the initial spec,CP constituent.

EME shows a marked increase in topics in negative inversion clauses which seems at first sight to correlate with the increased use of *not* in this period. However, the problem for van Kemenade's account is that the introduction of NP topics (as shown in Table 3.7) does not occur in parallel with the introduction of *na/not*. As I demonstrated in the previous section, there are NegV1 clauses with the secondary negators *na* and *not*. Van Kemenade's analysis predicts that these clauses should have subject or non-subject topics. In Old and Middle English clauses without initial operators, spec,CP is typically filled by a topic, either a non-subject or a subject topic. Hence NegV1 clauses with the secondary negators *na/not*, in which van Kemenade analyses *ne* as a head rather than a spec,CP operator, fall outside her analysis, and as such are a problem to it. She provides no rationale for *ne+V* movement to C⁰ in such clauses.

This undermines the structural account of (172) which van Kemenade proposes. Her proposals are unable to account for all negative clauses without further modifications. Van Kemenade's account involves a change in the spec,CP element from an overt operator *ne* to an overt topic (non-subject or subject). This follows from the reanalysis of *ne* from XP operator >X⁰, and the fact that the new negative operator (*na/not*) occupies a position lower than spec,CP. In view of this change, one might expect the reanalysis of *ne* from operator to head to lead to the loss of negative inversion. It can no longer be motivated under the Neg-criterion by an operator in spec,CP. The fact that inversion continues to occur following a fronted argument in spec,CP is puzzling. It is not clear whether this pattern arises as a consequence of the loss of NegV1 or whether it is a distinct pragmatic and syntactic strategy, such as focalisation, which just happens to be more frequent in Early Middle English. If operator *ne* and topics are the only two options in competition for spec,CP in EME as van Kemenade's account implies, the replacement of operator initial NegV1 clauses should be with topic-initial clauses in all cases.⁸ Van Kemenade proposes that loss of operator-hood for *ne* drives Jespersen's Cycle. Change from spec,CP operator to spec,CP topic is a consequence of Jespersen's Cycle. Hence the transition from operator-initial to topic initial clauses should exactly correlate with change under Jespersen's Cycle to eliminate NegV1. However, there are many NegV1 clauses with secondary negators (see Table 3.5) in which for van Kemenade (2000), the initial *ne* must be a head rather than a spec,CP element. Van Kemenade's proposals cannot account for the lack of topics in these clauses. NegV1 clauses at stage two of Jespersen's Cycle

⁸Irrespective of whether the finite verb is in C⁰ or a lower position in the topic initial clauses.

fall outside van Kemenade's account.⁹

- (175) Ne understandeð hie naht þat alswa michel senne hit is to breken
 Neg understand they not that also great sin it is to break
 fasten mid drinke...
 fast with drink...
 'They do not understand that it also a great sin to break the fast with
 drink...'
 (CMVICES1,137.1701)

Such clauses account for 8/25 (32%) of clauses with *ne...not* in the period 1150-1250. The results of the previous section show no loss of NegV1 contingent on Jespersen's Cycle. A syntactic account which links the incidence of topics in clauses with *ne* and change under Jespersen's Cycle makes a correlation where there is no evidence for one. There are plenty of exceptions to the correlation van Kemenade proposes: NegV1 clauses with bipartite negation which her account cannot handle. Also, van Kemenade's analysis does not take account of the fact that NegV1 needs to be productive at both stages of Jespersen's Cycle. So, although the increase in the 'Topic - *ne+V_{finite}* - subject pronoun' pattern is the result of the loss of NegV1, I find no correlation between this change and the increased use of the secondary negators *na/not*.

3.3.3 Conclusions: negative initial clauses and Jespersen's Cycle

The data presented here show that the loss of NegV1 is independent of the introduction of secondary negators. This finding compromises the account of 'XP - *ne+V su prn*' given in van Kemenade (2000). The increase in this pattern is contingent on the loss of a structural option for *ne* which both eliminates NegV1 and is responsible for the introduction of secondary negators. There is no direct correlation between the loss of NegV1, the increase in 'XP - *ne+V su prn*' orders, and the introduction of secondary negators. Therefore, there is no empirical evidence for the structural change affecting *ne* which van Kemenade proposes.

The findings of this section provide no evidence to distinguish the behaviour or syntactic status of *ne* at successive stages of Jespersen's Cycle in the way van Kemenade proposes. There is no quantitative evidence for the loss of phrasal *ne*

⁹Furthermore, not all instances of the 'Topic - *ne+V_{finite}*' pattern have bipartite negation (see (172a) for example). The two patterns are not in complementary distribution at the two stages of Jespersen's Cycle.

in any of the OE prose data, and no evidence that any change in the status of *ne* is responsible for the increase in clauses with 'Topic - *ne*+V_{finite} - subject pronoun' orders. Invoking two competing forms of *ne* does not account for the loss of NegV1, or Jespersen's Cycle, or for the distribution of 'Topic - *ne*+V_{finite} - subject pronoun' orders in the way that van Kemenade proposes.¹⁰ Therefore, I argue that clauses with initial *ne*+V_{finite} are derived in the same way at both stages one and two of Jespersen's Cycle, with *ne* a prefix on the finite verb which moves to C⁰. This is a simpler analysis. It does not require a change from operator to head *ne* for which the predicted evidence is lacking.

An account is required which can accommodate the independence of NegV1 and the introduction of sentential negators *na/not*. The independence of NegV1 and Jespersen's Cycle has been crucial to my argument, but brings its own problems for the syntactic analysis. The dependencies which NegV1 and bipartite negation represent must be independent. If we accept that Old English *ne...na* and Early Middle English *ne...not* are bipartite secondary negators in spec-head agreement with *ne*, as I claim here following van Kemenade (2000), then Jespersen's Cycle and the loss of NegV1 are two distinct parametric changes which cannot both be accommodated under the Neg-criterion. Invoking the Neg-criterion to account for both these phenomena does not allow them to co-occur, and is therefore empirically inadequate. There are two solutions to this problem in a Government-Binding framework: first to deny that Old English *na* and Early Middle English *not* are sentential negators subject to the Neg-criterion. This is the approach taken by Ingham (2005), but this ignores other evidence for the sentential negator status of these elements (see section 2.5). Second, the independence of NegV1 and bipartite negation could be modelled using two instances of the Affect-criteria which make reference to different features in the derivation of NegV1 and bipartite negation, or two different feature checking dependencies. Patterns of negation in the Old English poem *Beowulf* offer further arguments against analysing NegV1 under the Neg-criterion (see sections 3.5.1-3.5.2 for a full discussion).

¹⁰It remains unclear why initial non-subject arguments co-occur with negative inversion in Early Middle English. However, I have established that questions concerning the derivation of these clauses do not impact on the relationship between NegV1 and Jespersen's Cycle, so I will leave them aside here.

3.4 Feature checking accounts of negative initial clauses

Eythorsson (2002) observes a pattern of verb movement in Old Norse negative main clauses, which is similar to that seen in the Old English prose (176). The Old Norse negator is a suffix *-at* on the finite verb. While the Old Norse finite verb typically follows the subject in non-negative declaratives, finite verbs with the negative suffix *-at* precede the subject. Eythorsson (2002) draws parallels with the similar Old English phenomenon involving the negator *ne*, and with a similar phenomenon in Gothic (177) and Old High German (178). Eythorsson's Old Norse data parallel the OE data in that negative inversion typically results in a negative initial clause. The crosslinguistic Germanic evidence for NegV1 casts doubt on van Kemenade's analysis of NegV1, which treats it as a particularly OE innovation. The Gothic data indicate that NegV1 is not an OE innovation, but has common Germanic roots which antedate Old English.

- (176) gaft-at-tu ástgiafar (Old Norse)
 gave+NEG+you-SG love-presents
 'you did not give love-presents'
 (Rm 7, Eythorsson (2002, 199, ex.16b))
- (177) ni hugjaiþ ei qemjau gatairan witop (Gothic)
 NEG think that came-1SG tear-down law
 'do not think that I came to tear down the law'
 (Matt 5:17, Eythorsson (2002, 196, ex.12a))
- (178) ni waniu ih iu lib habbe (Old High German)
 NEG expect I still life has-3SG
 'I do not expect that he is still alive'
 (Hildebrandlied 29, Eythorsson (2002, 197, ex. 12c))

Eythorsson (2002) proposes a simple feature checking account which locates [NEG] features on C^0 . Movement of the negated finite verb to C^0 is then motivated by the need to check [NEG] features on C^0 . This kind of analysis could be extended to Old English clauses with negated finite verbs inverted with pronoun subjects. This obviates the need for the Neg-criterion to derive NegV1 clauses. The Neg-criterion is reduced to a feature checking dependency on C^0 . However, questions remain over how this feature checking dependency is satisfied in Old English. Minimalism provides two ways to satisfy the features of C^0 : Merge or Move, so initial *ne* may be merged or moved into a local relationship with C^0 . So, at issue is whether *ne* forms a syntactic unit with the finite verb in a position lower

than C^0 , or whether the derivation of initial *ne* is independent of verb movement. If *ne* forms a unit with the finite verb lower than C^0 (either in the lexicon or at Neg^0), then a [*uneg*] feature on C^0 will derive both the positions of *ne* and the finite verb through a single operation. Movement of *ne* will take the finite verb with it to C^0 . On the other hand, if *ne* is merged to satisfy features of C^0 , another feature checking dependency must be invoked to derive V to C movement.

A Minimalist approach provides a new perspective on the phrase structure of *ne*. A bare phrase structure approach to clitics like *ne* allows them to be an indeterminate X^0/XP category, behaving like a head in some ways and like a maximal projection in others. In a feature-driven derivation of negative initial clauses, the status of *ne* as head or phrase is not the central issue. More important questions are the position at which *ne* enters the derivation relative to the finite verb and how the features of C^0 and *ne* interact syntactically.

Unlike van Kemenade (2000), Eythorsson (2002) claims that the syntactic analysis of negated finite verbs in clause initial position should be the same throughout the history of negative initial clauses. He makes brief reference to Old English in this connection, arguing against van Kemenade's position. His central point, which my findings endorse, is that there is no reason to doubt that *ne* is a verbal prefix throughout Old English.

It is not immediately clear how a feature checking approach interfaces with changes under Jespersen's Cycle at this stage of the discussion. A recent account by Ingham (2005) maintains complementary distribution of bipartite negation and NegV1. In Ingham's account, *ne* only has suitable features to be a target for movement to C^0 at stage one of Jespersen's Cycle. Hence the conclusion that NegV1 is independent of Jespersen's Cycle is equally problematic to Ingham's analysis. He proposes that *na* and *not* are not secondary negators in clauses with NegV1. As in the Neg-criterion approach, this forces a late date for the reanalysis of EME *not* as a secondary negator. In chapter 4, I will use recent Minimalist assumptions to develop an alternative account which allows NegV1 and Jespersen's Cycle a measure of independence.

This discussion demonstrates that negative initial clauses cannot be considered in isolation from other patterns of early English negation. Negative initial clauses and bipartite negation at stage two of Jespersen's Cycle are predicted to be in complementary distribution by all existing approaches. Further research presented in chapter 4 will establish Minimalist syntactic analyses of both phenomena which takes proper account of their independence. These proposals will

be presented in the context of the Minimalist feature checking account of Jespersen's Cycle I develop in chapter 4.

3.5 Patterns of negation in the OE poem *Beowulf*

Van Kemenade (2000) provides an account for the lack of topics in clauses with negative inversion which makes reference to phrasal spec,CP *ne*. She proposes to treat clause initial *ne+finite verb* as an 'operator - head' construction fulfilling the requirements of spec-head agreement at CP under a version of the NEG-criterion. I argue that there is no quantitative evidence for the existence of phrasal *ne* in OE prose. There is no evidence for the loss of phrasal *ne* in the prose data or any competition between phrase or head *ne* in the prose linked to Jespersen's Cycle as van Kemenade's (2000) account predicts.

Evidence from *Beowulf* is less conclusive. The distribution of negatives is different in this text. Van Kemenade (2000) discusses a pattern of sentential negation with clause initial *no* (179, 180) which is not attested in the OE prose data. In *Beowulf*, at least some clause initial *ne* might have the same syntactic status as clause initial *no*: a spec,CP element. This is van Kemenade's (2000) claim.

(179) no he him þa sæcce ondred
 NEG he himself the struggle feared
 'he did not fear the struggle' (cobeowul,73.2345.1917)

(180) No he owiht fram me flodypum feor fleotan meahte
 NEG he at all from me waves-DAT far swim could
 'he could not get far from me at all on the waves' (cobeowul,18.541.460)

Instances of *ne* which are not clause initial show positional covariation with the finite verb, and therefore are heads (181), but clause initial *ne* could be either a head or a phrase (182).

(181) Hie þæt ne wiston
 They that NEG knew
 'They did not know that' (cobeowul,26.798.684)

(182) ne mæg ic her leng wesan
 NEG can I here long be
 'I cannot be here long' (cobeowul,86.2799.2283)

The occurrence of initial phrasal negatives in spec,CP such as *no* in *Beowulf* might support a parallel analysis of *ne* as a spec,CP element. This contrasts with

the conclusions I made in section 3.3.3 concerning the status of *ne* in the YCOE data. If there is phrase *ne* in *Beowulf* it must be lost between the time of *Beowulf* and the Old English prose, since there are good arguments against phrase *ne* in the prose. Unfortunately there are insufficient data from the early English period represented by *Beowulf* to show this change in progress.

3.5.1 Negative-initial clauses and the position of the finite verb

There is one reason to distinguish *ne* from phrasal negatives like *no*, *næfre* in the poetry. Initial *ne* always appears with a finite verb immediately following in C^0 . *No* (179-180), *næfre* (183) are never immediately followed by finite verbs in C^0 .

- (183) Næfre ic ænegum men ær alyfde
 Never I any man before injured
 'I never injured any man before'
 (cobeowul,22.652.549)

Van Kemenade (2000, 62) links the pattern with clause initial *no* in *Beowulf* with the NegV1 pattern in the OE prose. For van Kemenade (2000) the link between negative initial clauses with and without movement is diachronic and reflects the rise of V to C movement following initial negatives in early OE. This diachronic change has two aspects to it: phonological reduction of the spec,CP operator *no* to *ne*, and the rise of V to C movement following initial negative operators. Hence initial *no* in *Beowulf* is replaced by initial *ne+V_{finite}* in later OE prose. These two changes need to be linked in order to account for the fact that *ne* in Old English is the only initial negative to appear clause initially with a finite verb in C^0 .¹¹ This accounts for the loss of initial *no*. However, there are examples of initial negatives such as *næfre* which do not occur with a finite verb in C^0 in the prose (184-185) or in *Beowulf*. The prose examples (184-185) show that a generalised rise of V to C movement following initial negatives does not happen in OE.

- (184) Næfre ofer þis ic owiht ma spreco
 Never of this I any more said

¹¹Unlike Present Day English (i), (ii):

(i) Never will I believe it

(ii) Nothing have I seen that could rival the pyramids (Haegeman 2001, 26, ex 9b)

'I never said any more of this'
(cobede,Bede_3:12.196.26.1994)

- (185) Nænge þinga ic þas bliðe aberan mæg
No thing-GEN I this cheerfully bear can
'I cannot bear anything of this cheerfully'
(cobede,Bede_4:12.290.18.2930)

Beowulf frequently employs negative initial clauses with *no*, *næfre*, *nælas* (n=64), in addition to clauses with initial *ne* (n=77). Only initial *ne* appears with a finite verb in C⁰ (n=77/77 initial *ne*). Any account must make a distinction between *ne*, which induces verb movement, and negatives like *næfre* which do not. The Neg-criterion does not easily accommodate this distinction. It applies wherever an negative operator is found. In order to derive the difference between *ne* and other spec,CP negatives in respect of verb movement, *ne* must be the only initial negative to count as an operator for the Neg-criterion, so that *no*, *næfre* are excluded from the criterion.

This distinction is difficult to maintain under Haegeman's (1995, 107) definition of a negative operator. Under this definition, *Ne*, *no*, *næfre* are all equally sentential negative operators in spec,CP and should all be subject to the Neg-criterion in the same way.

- (186) a. NEG-operator: a negative phrase in a scope position;
b. Scope position: left peripheral A'-position [Spec,XP] or [YP,XP]
(Haegeman 1995, 107)

The distinction between initial *ne* with V to C movement, and *no*, *næfre* without V to C movement could be derived by applying movement at different levels of the grammar. The Affect-criterion could apply overtly for *ne* and at LF for *no*, *næfre*, but applying the criterion at different levels for different lexical items seems difficult to motivate and rather arbitrary.

Van Kemenade's account requires variation and change in the way the Affect-criterion is satisfied in Early and later Old English to account for what she proposes are changing patterns of verb movement. She claims that initial *no* is reduced to *ne* by an increase in V to C movement following initial negatives (187, 188). This does not fit well with the idea of the Neg-criterion as a principle of Universal Grammar (see Haegeman (1995)).

- (187) [_{CP} no [_C [_{AgRP} subject pronoun [_{AgR} V_{finite} ...]]]]

(188) [_{CP} ne [_C V_{finite} [_{Agr P} subject pronoun [_{Agr} t ...]]]]

She claims this accounts for the lack of initial *no* in her Old English prose data. However, where patterns analogous to those seen in *Beowulf* with initial *næfre*, appear in later prose (184), they provide no evidence for change in V to C movement patterns. Initial *næfre* occurs in later prose without V to C movement just as it did in *Beowulf*. V to C movement does not develop in this context. Regrettably, there are no instances of clause initial *no* in the prose for comparison with those in poetry. The evidence available to me is consistent with an analysis with no change in verb movement patterns, either between poetry and prose, or between successive stages of Jespersen's Cycle: fronting of *ne* always entails verb movement to C⁰, fronting of other negatives (*no*, *næfre*) does not. The difference between poetry and prose is therefore likely to be the absence of clauses with clause initial *no*, *næfre* as the primary sentential negator in the prose rather than any rise in V to C movement following clause initial negatives.¹²

Eythorsson (2002) argues against van Kemenade's link between *ne* and *no*. He claims that *ne* and *no* are etymologically distinct, even in the pre-Old English period. *No* is not reduced to *ne* by a process of change. This is consistent with the distribution of *ne* found in earlier Germanic languages such as Gothic (Eythorsson 2002).

The negation *ni* (*ne*) is a prefix like element on the verb, representing an Indo-European inheritance in Old Germanic ... The anonymous reviewer, citing van Kemenade (2000), mentions that there is evidence for a stage in the earliest Old English at which a negative element could occur in a clause-initial position without "attracting" the verb. This view, however, seems to be based on a confusion regarding the relevant form in question. In particular, the claim in van Kemenade (2000, 61-63) that the prefixal negation *ne* represents a "reduced" variant of the free form (adverb) *no* (*na*) 'not at all, not, never' in Old English fails to take the long-established etymology of these elements

¹²Taken at face value, the YCOE data provide little evidence for the loss of *no* which follows from van Kemenade's account. In *Beowulf*, *na/no* accounts for 37/163 (23%) of negative non-conjoined main clauses. In the O2 prose, *na/no* accounts for 114/466 (24%) of negative non-conjoined main clauses. The difference between the two datasets is that in *Beowulf* only 1/37 (3%) co-occur with *ne*. In O2 82/83 (99%) co-occur with *ne*. These figures do not show the loss of *no/na*. They show that *no/na* comes to be supplemented by *ne* in negative doubling rather than replaced by *ne*.

into consideration, according to which *ne* is the inherited negation but *no* (*na*) derives from a combination of this negation with an adverb, corresponding to Gothic *ne aiw* 'never (i.e. not ever)' (e.g. Klæber 1950:381). Thus, in Old English from the earliest times, the negation *ne*, by virtue of being a prefix, regularly precedes the finite verb, irrespective of its position in the clause. The word *no* (*na*), on the other hand, is an adverb and can occur separated from the verb. (Eythorsson 2002, 219-220, note 12)

Eythorsson's account favours an analysis of *ne* as a clitic or prefix throughout the Old English period. *Ne* should be kept distinct from *no* and other initial adverbs. The differences in the position of the finite verb following these elements requires them to be distinguished so that only initial *ne* co-occurs with a finite verb in C^0 . I have argued that a Neg-criterion based derivation does not facilitate an account of this difference. However, a feature-checking based account, such as Eythorsson (2002) does, providing *ne* and the finite verb form a unit prior to movement to C^0 . The difference between *no* and *ne* is that *no* is an adverb whilst *ne* is a prefix on the finite verb. Only movement of *ne* will require movement of the finite verb.

In summary, there is no reason to argue that the syntactic status of *ne* in the poetry differs from *ne* in the later prose, scant evidence for a rise in V to C movement in Early Old English negative initial clauses, and good syntactic reasons for separating *no* and *ne* in Early Old English. In the next section, I will show that there is good evidence from prosody to distinguish *no* and *ne* in *Beowulf*. *Ne* behaves as a clitic, *no* behaves as an adverb. Given that there is no good empirical evidence for a change in the status of *ne* during Old English, the analysis of *ne* as a head can be adopted from the Early Old English of *Beowulf* onwards as the simplest or null hypothesis. V to C movement only co-occurs with *ne*+finite verb because *no*, *næfre* are never prefixed to the finite verb either in the lexicon or during the derivation. Eythorsson's (2002) observations concerning Old English in relation to other Germanic languages support my hypothesis.

3.5.2 The prosody of *no* and *ne*

Under a feature checking account of negative initial clauses, a further issue remains to be addressed. Why is fronting of *no*, *næfre* categorical in *Beowulf* whilst fronting of *ne*+ V_{finite} is not? Up to now, I have assumed that the derivation of ini-

tial *no*, *næfre* is the same as the derivation of initial *ne*+V_{finite}, namely [neg] feature checking on C⁰, yet negated finite verbs do not move to C⁰ in all instances, unlike negative adverbs (Table 3.8). However, the distribution of negative adverbials is similar to that of non-negative adverbials. Both tend to appear in clause initial position. So the fronting of negative adverbs may simply be a subcase of a more general movement rule which fronts adverbs (negative and non-negative) to clause initial position. In this section, I argue that the movement of negative adverbs to clause initial position is related to prosodic constraints operating on alliterative poetry. This motivation for movement is common to negative and non-negative adverbials. However, the syntactic form or motivation of this movement rule requires further work to establish.

Negative	Clause initial	Elsewhere	TOTAL
<i>ne</i>	77 (61%)	49 (39%)	126
<i>no</i>	37 (100%)	0	37
<i>næfre</i>	5 (100%)	0	5
<i>nænig/nealles</i>	22 (100%)	0	22
TOTAL	141 (74%)	49 (26%)	190

Table 3.8: The distribution of negatives relative to subject pronouns in *Beowulf*. Non-conjoined main clauses only.

Negative adverbs, including *no*, categorically appear clause initially in non-conjoined main clauses in *Beowulf*, whereas negated finite verbs do not. This fact demands an explanation, particularly for a feature checking account in which movement to C is to check [NEG] features on C⁰. Under such an account we would expect a uniform frequency of fronting for all elements with [NEG] features, whether verbal or non-verbal, because the motivation for fronting is a requirement of the head C⁰ rather than the moved element. However, I claim that prosodic constraints affect the fronting of negatives to clause initial position. The prosodic status of *ne* and *no* is different, hence the prosodic constraints operating on the placement of verbal and non-verbal negatives are different.

What we know about the prosody of *Beowulf* leads us to expect differences in the distribution of adverbs and finite verbs under Kuhn's laws (see Lucas (1990) for an English summary of Kuhn's Laws). The different distributions of *no* and *ne* lie in the different prosodic behaviour of *ne* and *no* and provide a further argument for distinguishing these elements.

The prosodic organisation of *Beowulf* is for each line to be split into two half-line units. The stressed syllables of the two half-lines must alliterate. Evidence

from alliteration indicates that *no* and *ne* are never stressed. The distribution of unstressed elements is highly constrained under Kuhn's laws. Below I cite the English summary of Kuhn's laws given in Lucas (1990). We see that unstressed elements can be of two kinds: particles or clitics. *No* has the status of a particle, whilst *ne* has the status of a clitic.

Particles are words which do not naturally carry a strong stress, but neither are they subordinated to any other word in particular: finite verbs, personal and demonstrative pronouns, conjunctions and some adverbs.

(Lucas 1990, 293)

Clitics: if as is usual, they are proclitics, are unstressed words dependent on a following stress word.

(Lucas 1990, 293)

Kuhn's First Law: his law of particles (*Satzpartikelgesetz*) states that all the particles in a verse clause [I take this to mean a half-line] must be grouped together in the first metrical dip, ie. all before ... the first stress-word; if a particle does not occur in the first dip, it ceases to be a particle and becomes a stress-word. There are hardly any certain breaches of Kuhn's first law in *Beowulf*.

Kuhn's Second Law: his law of clause openings (*satzspitzengesetz*) states that if there is a natural dip before the first lift in a verse clause then the dip must contain a particle; the dip may not be occupied solely by clitics.

(Lucas 1990, 294)

The distribution of clitics is dependent on the distribution of their hosts. In the case of *ne* the host is the finite verb. Getty (2000) shows that fronting of the finite verb in *Beowulf* is affected by prosodic factors, such as stress and syllabic weight. Stressed and alliterating verbs will follow all particles in a half-line. Furthermore, Getty argues that fronting of the finite verb is less favoured the heavier its syllabic weight is. Subject pronouns are particles, so in clauses with subject pronouns, only unstressed and syllabically light verbs which are themselves particles can precede the subject pronoun. Stressed or syllabically heavy verbs will follow the subject pronoun, and other particles such as adverbs.

In contrast, *no* and *næfre* are prosodically independent of the verb, as particles which are always unstressed. Metrical differences in the behaviour of negative elements reduce to two prosodic facts: first, whether a negative element is a clitic or a particle, and second if the negative is a clitic, the syllabic weight and stress associated with its host element. Under Kuhn's laws, a negative element's position in the clause follows from these facts. *no*, *næfre* are always particles. Negative adverbs such as *no*, *næfre* do not bear stress or alliterate. Some negated finite verbs are particles, but others can alliterate and bear stress. Hence, negative adverbs always have the status of 'particles' under Kuhn's laws, whereas the prosodic status and behaviour of negated finite verbs is more variable. Factors determining the position of *no* are independent from those determining the position of *ne*, hence we see no diachronic link between clauses with initial *no* and clauses with initial *ne*. These two negatives are clearly distinct in the poetry, and syntactically unrelated. The reasons why the *no*-initial pattern is only found with any frequency in *Beowulf* is not due to a rise in V to C movement in later OE as van Kemenade (2000) claims, but due first to the fact that *ne* is rarer in *Beowulf* than the later prose, and second, that the prosodic constraints affecting the position of *no* are not a factor in prose texts.

This account is an advance on van Kemenade (1997a; 2000) who has no account for the distribution of adverbs such as *næfre* in OE prose. These do not trigger V to C movement at any period, and cannot be related to the later negated finite-verb initial pattern in the same way as van Kemenade's account proposes for *no*. They provide no evidence for a generalised rise of V to C movement following initial negatives, and fall outside van Kemenade's account. She does not relate the distribution of *no* to the distribution of other negative constituents in clause initial position.

The fronting of negative phrases in poetry is partly a response to prosodic demands particular to the alliterative poetry of the early Old English period. However, there are a few (n=32) examples of initial negative phrases in the OE prose which do not co-occur with *ne*. These can appear clause initially, and do so without inducing V to C movement in all cases. Examples are given in (189-190). In prose texts, the placement of negative phrases is more variable than in *Beowulf*, they appear in lower positions too (191, 192).¹³ This difference between poetry

¹³It is worth noting here that the OE *Bede* and the *Vercelli Homilies* are texts which provide most instances of initial negative adverbs or NPs in the prose. One speculation concerning the reasons for this is dialect. Both the OE *Bede* and the *Vercelli Homilies* are observed by Levin (1958) to have

and prose supports the idea that the position of negative adverbs in *Beowulf* is constrained by prosodic factors which are absent from prose.

- (189) Næfre ofer þis ic owiht ma spreco
 Never of this I any more said
 'I never said any more of this'
 (cobede,Bede_3:12.196.26.1994)
- (190) Nænge þinga ic þas bliðe aberan mæg
 No thing-GEN I this cheerfully bear can
 'I cannot bear anything of this cheerfully'
 (cobede,Bede_4:12.290.18.2930)
- (191) Se næfre ænig word gecweðan meahte
 He never any word say could
 'He could never say a word'
 (cobede,Bede_5:2.388.17.3859)
- (192) Ðæt geat soðlice þæs mynstres næfre geopenod wæs
 The door certainly the church-GEN never opened was
 'Certainly, the door of the church was never opened'
 (comary,LS_23_[MaryofEgypt]:101.65)

3.5.3 Towards unifying of the patterns seen in poetry and prose

I argued that *ne* is a prefix on the finite verb in both poetry and prose, throughout the Old English period. An account which invokes two forms of *ne* is not required. This is a more satisfactory account than van Kemenade's which links the patterns seen in poetry and prose by invoking a rise in V to C movement. A rise in V to C movement is difficult to motivate under the Neg-criterion. My account is simpler, and the derivation of initial negatives the same throughout Old English and Early Middle English. Negatives which appear in initial position do so to check negative features on C⁰. Only fronting of *ne* entails V to C movement, as only *ne* forms a syntactic unit with the finite verb (as a prefix or clitic) at the point when movement to C takes place. *no*, *næfre* do not form a syntactic unit with the finite verb at any point of the derivation.

more Mercian or Anglian features than other texts which are more strictly West Saxon in dialect. Similarly, *Beowulf*, in which fronted non-verbal negatives are most frequent has also been argued by Fulk (1992) to contain features associated with Anglian or Mercian dialects, in common with much of the poetry.

There are two differences between poetry and prose, which may be due to linguistic change, or other sources of variation such as dialect or stylistic factors such as genre. First, there is more *ne* in prose than poetry (Mitchell (1985, , §1609), and see also section 6.2). Second, prosodic factors affect the frequency of fronting of adverbs *no*, *næfre* and negated finite verbs in poetry in ways which are absent from the prose. The differences between prose and poetry can be explained away as the consequence of external facts about the prosodic organisation of the poetry. Once these are taken into account, the patterns of negation in *Beowulf*'s main clauses require no reference to changes in movement strategies. I maintain that there are no changes in V to C movement strategies until negative initial clauses are lost in Early Middle English.

3.6 Summary and Conclusion

This chapter has demonstrated shortcomings in Neg-criterion approaches to the derivation of negative-initial clauses. First, such approaches derive complementary distribution between negative-initial clauses and bipartite negation (*ne...na/ne...not*). This does not accurately reflect the observed distribution of clauses with initial *ne*, which may also have bipartite *ne...not/ne...na* negation in late Old English and early Middle English. I used these data to argue against postulating two distinct forms of *ne* at successive stages of Jespersen's Cycle (as van Kemenade (2000) does), but these data pose a problem for all accounts which discuss the interaction of NegV1 and Jespersen's Cycle, not just van Kemenade's account. An account is required which accommodates the observed independence of NegV1 and secondary negators, that is one which can explain the loss of negative-initial clauses without preventing the derivation of negative-initial clauses at stage two of Jespersen's Cycle. Alternatively, we are forced to claim, like Haerberli (1991) that Old English *ne...na* is not bipartite negation representing spec-head agreement under the Neg-criterion. The same goes for early Middle English *ne...not*, at least in clauses where *ne* is clause-initial. If we take the semantic bleaching of *not* and its frequency as two measures of *not*'s reanalysis then it appears to be used as a sentential negator in many instances in EME, irrespective of its appearance in NegV1 clauses. These data are problematic for an account which takes NegV1 and bipartite negation to be distinct manifestations of the Neg-criterion. See chapter 4 for a feature based account of Jespersen's Cycle and NegV1 which allows for the distribution of NegV1 and bipartite sentential negation.

My second argument against a Neg-criterion approach is that it fails to provide sufficient flexibility to address the relationship between negative initial clauses in prose, which have V to C movement, and those negative-initial clauses in the Old English poem *Beowulf* which do not have V to C movement. The Neg-criterion does not accommodate the distinction very easily, and van Kemenade's proposed increase in V to C movement during early Old English is poorly evidenced in my data. Instead, I proposed that the different verb-movement patterns follow from the fact that *ne* is a prefix on the finite verb at the point of movement of *ne* to C to check [NEG] features. Therefore, movement of *ne* to C entails movement of the finite verb to which it is prefixed. In contrast, *no*, *næfre* are independent adverbial elements which never form a syntactic unit with the finite verb. Differences in the frequency of fronting of various elements in prose and poetry are in part consequences of prosodic constraints which hold of the different elements in the poetry, and the lack of such constraints in the prose.

I have shown that an account of negative-initial clauses in prose or poetry need make no reference to changes in the status of *ne*, nor to changing patterns of verb-movement.

Chapter 4

Parametric change in early English negation

4.1 Introduction

The previous chapter demonstrated that the introduction of secondary negators and the loss of NegV1 are the consequences of two independent parametric changes, contrary to van Kemenade's (2000) proposals. This chapter will consider the nature of these changes within a Minimalist feature driven framework. A Minimalist approach to parametric variation provides a new perspective on Jespersen's Cycle and to the phrase structure of negation in comparison to previous Government-Binding approaches under the Neg-criterion (Haegeman 1995). It also provides a new perspective on negative initial clauses which avoids the problems associated with van Kemenade's (2000) Neg-criterion based approach.

I seek to identify the parameters underlying change under Jespersen's Cycle and the loss of NegV1. Considering the loci of parametric variation informs a structural analysis of negation. Jespersen's Cycle is not a straightforward case of change. There is a stage in EME at which two negative markers are regularly used to mark sentential negation. This appears to violate principles of semantic compositionality. However, this stage is typologically marked and diachronically transient in the history of many languages (including Dutch, German and the Scandinavian languages). I will pursue some ideas which arise out of van Kemenade's account. Her account involves a change in the status of *ne* in the history of English. We saw in chapter 3 that change under Jespersen's Cycle does not involve a change in the phrase structure status of *ne* from operator to head, as

van Kemenade proposes. All the Old and Middle English evidence points to *ne* being a head throughout the period at both stages one and two of Jespersen's Cycle. Rowlett (1998) proposes to distinguish two types of *ne* at successive stages of Jespersen's Cycle whilst maintaining the idea that the two are the same in phrase structure terms, both heads. This approach lends itself to an account within the Minimalist framework, and has important implications for the phrase structure representation of negation. I contrast an approach which posits two types of *ne* with more conventional Neg-criterion approaches which posit only one. I conclude that the Neg-criterion can be parametrised in English as part of Jespersen's Cycle. In chapter 5, I develop a quantitative account of Jespersen's Cycle as grammatical competition based on these proposals. I examine quantitative evidence for two types of *ne* in Middle English. The different approaches to bipartite negation considered here, which involve one or two forms of *ne* make different predictions concerning the progress and structure of Jespersen's Cycle. The diachronic facts will support an account which makes reference to two different types of *ne*.

These proposals concerning *ne* have consequences for the availability of redundant or expletive negation in English. The distribution of redundant *ne* provides important evidence for distinguishing two types of *ne* at a particular stage of early English. Finally for this chapter, I consider the derivation of NegV1. The architecture of a phase-based Minimalist framework (Chomsky 1999) allows for the independence of NegV1 and Jespersen's Cycle. I will argue that *ne* ceases to be a target for movement to C because it loses the features which identify it as a target for movement. This is independent of the progress of Jespersen's Cycle. This accords with the data I presented in chapter 3 and avoids the stipulation that EME *not* must be an adverb rather than a sentential negator which Ingham (2005) proposes.

4.2 Parametric change and negative dependencies

4.2.1 Jespersen's Cycle

The co-occurrence of *ne* and *not* is problematic to a compositional account of negation. *Ne...not* emerges at a particular point in the history of English (EME) as a diachronic stage in Jespersen's Cycle.

Jespersen's Cycle:

- Stage 1: Negation is expressed by one negative marker (OE and EME *ne*).

(193) we ne mugen þat don
 we NEG can that do
 'We cannot do that' (CMTRINIT,103.1370)

- Stage 2: Negation is expressed by two negative markers. The negative at stage one co-occurs with a second negative marker, whose position is fixed (ME *ne...not*, OE *ne...na/no*).

(194) I ne may nat denye it
 I NEG may not deny it
 'I may not deny it' (CMBOETH,435.C1.262)

- Stage 3: Negation is expressed by a single negative marker as the original negative marker present at stage 1 is lost (ME *not*).

(195) I know nat the cause
 I know not the cause
 'I do not know the cause' (CMMALORY,627.3549)

Analysis of *ne...not* is problematic. At the preceding stage of Jespersen's Cycle *ne* is sufficient to mark negation independently. Likewise, at a later stage of Jespersen's Cycle *not* is sufficient to mark negation independently, yet there is a period in Middle English when they co-occur. At this point, they cannot both be semantic markers of negation, or double negation readings should result. Jespersen's Cycle does not involve the substitution of one sentential negator (*ne*) with another (*na/not*). This constitutes the simplest change scenario. However, instead of a substitutive change (*ne>not*), Jespersen's Cycle involves a supplemental change (*ne>ne...not>not*).

The changes to negation in Middle English provide evidence for two negative elements, and a dependency between them. However, the stage when morphology provides evidence for this dependency, at stage two of Jespersen's Cycle, is short-lived in English. The central question for an account of parametric variation is whether this dependency is universal, as Haegeman (1995) proposes under the Neg-criterion, or whether it should be parametrised and variable.

4.2.2 The Neg-criterion (Haegeman 1995)

The Neg-criterion is a syntactic licensing condition on negation, which is manifest as an evaluative well-formedness condition or surface filter (196). See section 1.3.3 for a discussion of the Neg-criterion, its syntactic effects and motivation.

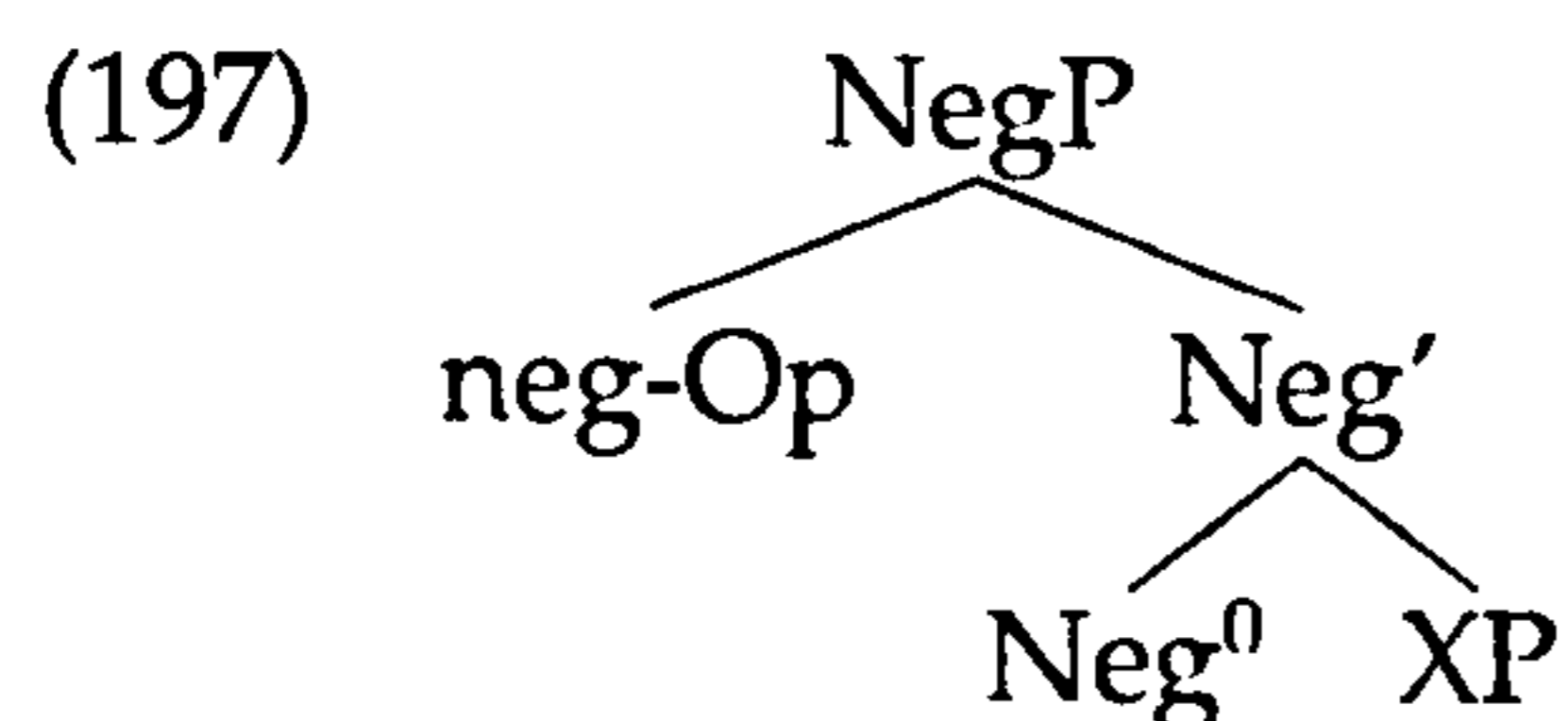
(196) **The Neg-criterion:**

- a. Each Neg X^0 must be in a spec-head relationship with a Neg operator.
- b. Each Neg operator must be in a spec-head relationship with a Neg X^0 .
- c. NEG-operator: a NEG phrase in a scope position
- d. Scope position: a left-peripheral A'-position (i.e. XP-adjoined or Spec).

(Haegeman 1995, 106)

The condition makes negation parallel to other operators such as interrogative *wh*-. The Neg-criterion is a subtype of the Affect-criterion, which is used by Haegeman and others to derive *wh*- movement. However, the parallel between negative constructions and *wh*-constructions is not the most useful perspective from which to view the historical development of negation. Negative clauses go through several historical developments or stages, whilst the syntax of *wh*-phrases appears to remain largely unchanged.

The Neg-criterion holds of all negative clauses. Therefore, negation is always composed of two parts, even when only one receives overt morphological expression. The structure of negation always involves spec-head agreement between a negative head and a negative operator, as in (197). The agreement relation under the Neg-criterion does not presuppose the existence of NegP. However, *not* is commonly assumed to be a negative operator, merged to satisfy the Neg-criterion at spec,NegP. Wherever NegP is projected it conforms to the X'-schema, having a single specifier position and a single head position. NegP is commonly assumed to be a projection in the INFL complex where the spec-head configuration required by the Neg-criterion can hold. Satisfaction of the Neg-criterion within INFL requires an extra head and specifier position.



Under the Neg-criterion hypothesis, Jespersen's Cycle relates to the morphological expression of negation. The changes do not affect the underlying syntac-

tic representation of negation in any way. Therefore, the bipartite *ne...not* pattern is analysed by Frisch (1997) and van Kemenade (2000) as a construction in which both positions are morphologically realised. The occurrence of two negative markers does not indicate any morphosyntactic change in the syntactic representation of negation, but simply a change in the way the two pre-existing NegP positions are realised in the morphology.

Morphologically overt bipartite negation is largely transient in the history of Germanic languages (English, Dutch, German). The Neg-criterion based accounts rely heavily on non-overt heads and operators to derive the observed patterns of negation in the history of English at stages one and three of Jespersen's Cycle. A non-overt operator is required in Old English clauses negated by *ne*. A non-overt head is required for Middle English clauses negated by *not*. The change from non-overt to overt operator and the change from overt to non-overt head are independent morphological changes (see Frisch (1997) for an account of Jespersen's Cycle based on this view). The logical conclusion of this is that both specifier and head positions could be filled by non-overt material, and a clause receive a negative interpretation without having any overt negative morphology. An additional constraint has to be stipulated that negation must be morphologically identified on either specifier or head position for NegP to be projected. This constitutes a dependency between the morphological realisations of negation in the clause under the Neg-criterion which is not predicted by, or easily accommodated within the account. Whilst such a surface filter, like Economy of Projection (Frisch 1997, 50), is possible in the Government-Binding framework, it is not in keeping with recent derivational frameworks such as Minimalism. Hence one aim of my analysis is to see whether this condition on the expression of negation can be incorporated into the syntactic analysis rather than being imposed as an additional stipulation.

Frisch (1997) proposes an account of Middle English changes in sentential negation in terms of the Neg-criterion. He claims that there are two changes: in the morphological realisation of the head and the morphological realisation of the operator in specifier position. These two changes are independent. The bipartite negation found at stage two of Jespersen's Cycle results from the intersection of these two changes. Bipartite negation is a consequence of the way the change is structured over time, with the introduction of *not* preceding the loss of *ne*. One problem with this approach to Jespersen's Cycle is that it does not offer any explanation for why the change in negators is structured in three stages in so many

languages. The three stages are an historical accident of the way the changes pattern in English: the fact that the introduction of *not* precedes the loss of *ne*. This seems an inadequate explanation given the recurrent pattern of Jespersen's Cycle cross linguistically. This indicates to me that some linguistic principles are at work rather than language particular factors.

4.2.3 Modifications to the Neg-criterion: Rowlett (1998)

Rowlett (1998) addresses the use of null categories under the Neg-criterion, questioning the need for spec-head agreement in all negative clauses. Unlike Haegeman (1995), he argues that negation must be interpretable on a head for a reading of sentential negation to obtain. Rowlett's version of spec-head relations does not require feature identity like Haegeman's approach. Rowlett argues that it is sufficient that the feature specifications of specifier and head are compatible, that is non-contradictory. Hence when [neg] features are present on a functional head, there is no need to introduce an agreeing specifier in order for [neg] to be interpreted at LF. The specifier is only introduced when required to pass negative features on to a head which is not lexically specified with these features.

If all that is needed to mark sentential negation is the presence of the feature [+NEG] on a functional head, then transferring the feature to an operator in specifier position serves no purpose and should arguably not be allowed. Certainly, as an interpretable feature, the presence of [+NEG] on a functional head at LF should not in itself be problematic. Consequently, the presence of a suitable operator in Spec,NegP cannot be motivated for checking reasons.

In contrast, transferring the feature from the operator to the head serves a clear purpose, since, in the absence of such a feature specification on the head, sentential negation will not be marked.

(Rowlett 1998, 112)

Jespersen's Cycle involves different syntactic configurations at stage one and stage two. A syntactic dependency between a specifier and a head emerges at stage two which was not present at stage one. Rowlett's account implies that Jespersen's Cycle is driven by changes affecting the ability of *ne* to mark sentential negation, which corresponds to Jespersen's own view of the motivation behind

the change. There are two different types of *ne* at successive stages of Jespersen's Cycle.

Haegeman observes that the West Flemish negative marker *en-* is only licit when another negative element is present in the clause. Both Haegeman and Rowlett therefore have 'negative' heads which are not inherently negative at stage two of Jespersen's Cycle, and sentential negation marked by a negative phrase (*pas* in French, *nie* in West Flemish). For Rowlett (1998), *ne* is only assigned [+NEG] during the syntactic derivation rather than in the lexicon. One problem with Rowlett's approach is that he does not make clear what the features associated with the agreeing form of *ne* are. He claims that *ne* is not [+NEG], but it is necessary for *ne* to have some feature which restricts its distribution to negative and expletive negative contexts, and allows it to enter the derivation as a syntactic head.

Importantly for Rowlett, the phrase structure of NegP remains the same at all stages of Jespersen's Cycle, with specifier and head elements, but the morphosyntactic feature [neg] is distributed differently within NegP at successive stages of Jespersen's Cycle. At stage one [neg] is associated with the head Neg⁰. At stage two [neg] is associated with spec,NegP and is introduced in order to pass features on to Neg⁰. The phrase structure of NegP is invariant, with an operator in specifier position in all instances. However, this operator does not have [neg] features at stage one of Jespersen's Cycle. At this stage, it is an expletive operator and serves only to mark a barrier to A'-movement operations. This operator serves to derive Relativised Minimality effects and explain why negative clauses are islands for wh-extraction (see section 1.3.2).

Some aspects of Rowlett's proposals are slightly unclear, in particular the syntactic status of the negative head at stage two of Jespersen's Cycle. At this point of the discussion, it is not clear what the role of Neg⁰ is at stage two of Jespersen's Cycle, given that it is redundant as a marker of sentential negation. This amounts to the question of how to characterise the difference between stages two and three of Jespersen's Cycle. As a first approximation, we might say that *ne* is an historical relic of an earlier stage, that the deletion of *ne* is not simultaneous with its becoming redundant as a negative marker. We will see in chapter 5 that this idea fits naturally with the notion of grammar competition.

Rowlett's proposals yield a new account of the changes involved in Jespersen's Cycle. Instead of Jespersen's Cycle being a product of variation in the morphological expression of an underlying and invariant spec-head relation under

the Neg-criterion, the variation involved is morphosyntactic rather than purely morphological. Variation in the feature specifications of the operator and head drives Jespersen's cycle. This requires different types of *ne* at successive stages of Jespersen's Cycle one with [+NEG], the other without. These are two different lexical items and will behave independently across time. Furthermore, under Rowlett's account there is no null [+NEG] operator. The only [+NEG] operator is overt *not*. The distribution of the [+NEG] operator *not* is determined by the featural specification of the head, and its introduction represents the innovation of a new feature checking dependency. This account ties the semantic expression of negation more closely to its morphological expression than previous approaches under the Neg-criterion. Every lexical item with [NEG] features in the syntax must have a morphological realisation. This has advantages for the language learner. However, it is not precise enough: at stage two of Jespersen's Cycle *ne* is an overt morpheme, yet it does not have [NEG] features. The features associated with *ne* at this stage need to be worked out. Rowlett's approach to Jespersen's Cycle based on feature checking fits naturally into more recent Minimalist frameworks, with some slight modifications. In the next section, I will outline the Minimalist framework I will adopt, as a preliminary to my syntactic proposals in section 4.4.

4.3 The Minimalist framework: syntactic assumptions

Recent Minimalist feature driven frameworks provide a new and different perspective on morphosyntactic variation and change, and on the nature of syntactic dependencies, such as the one which holds between *ne* and *not* at stage two of Jespersen's Cycle. In this section, I set out the salient tenets of the framework, including the architecture of the system, the nature of morphosyntactic features and dependencies. The framework I adopt is based on Chomsky (1999; 2000), with a few modifications, which have important consequences for the derivation of the patterns of negation attested in early English.

4.3.1 The architecture of the system

The impetus behind this framework is to simplify the range of syntactic operations, so that all dependencies and movement processes are products of the same syntactic mechanisms. The intuition which the programme explores is that the

syntax is an optimal response to conditions at the interfaces. The syntax interfaces with two other modules of cognitive competence: the conceptual-intensional system (at the LF interface) and the articulatory-perceptual system (at the PF interface) which impose legibility conditions on the derivation. The derivation must contain only elements which can be interpreted at one or both of these interface levels.

All syntactic operations are triggered by features on lexical items which are selected from the lexicon to form a numeration at the start of each derivation. This reduces all parametric variation to lexical variation. The properties of lexical items have primary relevance to determining the application of syntactic rules and operations. The mechanisms of the computation, by which the derivation is constructed, are themselves invariant. There are only two operations: Merge which builds syntactic structure, and Agree which underlies all syntactic dependencies, including long distance agreement and movement. Movement is achieved by a combination of Agree and (re-)Merge (see section 4.3.2 for a discussion of agreement and movement).

Parametric variation is highly constrained, amounting to differences in features which allow the application or non-application of universal syntactic rules. Features are bivalent rather than multivalent, so parameters are binary: either an operation applies to a particular lexical item (LI), or it does not.

Within this framework, phrase structure is constructed as a consequence of syntactic operations rather than being a primitive as in X'-theory. Therefore, phrase structure is demoted in importance to syntactic relations. What is more important is the relation between morphosyntactic features. One consequence is that a head can have multiple specifiers if feature checking requires this configuration. Conversely, a head does not always need to appear with a matching specifier if it does not have the features which will attract an element into a specifier position. These ideas will have important consequences for the phrase structure of negation at the different stages of Jespersen's Cycle.

4.3.2 Morphosyntactic features and syntactic operations

There are two types of morphosyntactic features within this system, those which have a value at the LF interface, and those which do not have any value or interpretation at LF. Following Chomsky (1999), I will adopt the idea that morphosyntactic features are [attribute:value] pairs. There is a distinction between features

which emerge from the lexicon with both attribute and value and features which emerge from the lexicon with attribute but no value. Unvalued features must become valued during the course of the syntactic derivation, before the LF interface is reached. Unvalued features are deficient and illegible at the LF interface. Any such features remaining at the interface will cause the derivation to crash. Unvalued morphosyntactic features are present either because they have some morphological reflex at PF, or because they are formally required to induce certain syntactic operations and relations during the derivation. All syntactic relations hold between valued and unvalued features. The syntactic operations which induce syntactic relations or dependencies also eliminate unvalued features prior to the LF interface. Unvalued features are valued by matching against features with the same attribute which already have a value. Feature valuation is subject to syntactic constraints. Let us call the unvalued feature the probe, and the valued feature the goal, and the feature valuing relation between them Agree, as in Chomsky (1999; 2000). The following conditions hold on Agree

1. The probe must C-command the goal.
2. The goal must have a valued feature which matches the probe's unvalued feature.
3. The goal must also have an unvalued feature, which renders it syntactically active and identifies it as a target of Agree. This feature will be matched with a valued feature of the probe.
4. The probe and goal relation must be the most local pair of matching features. No item with matching features can intervene between the probe and the goal.

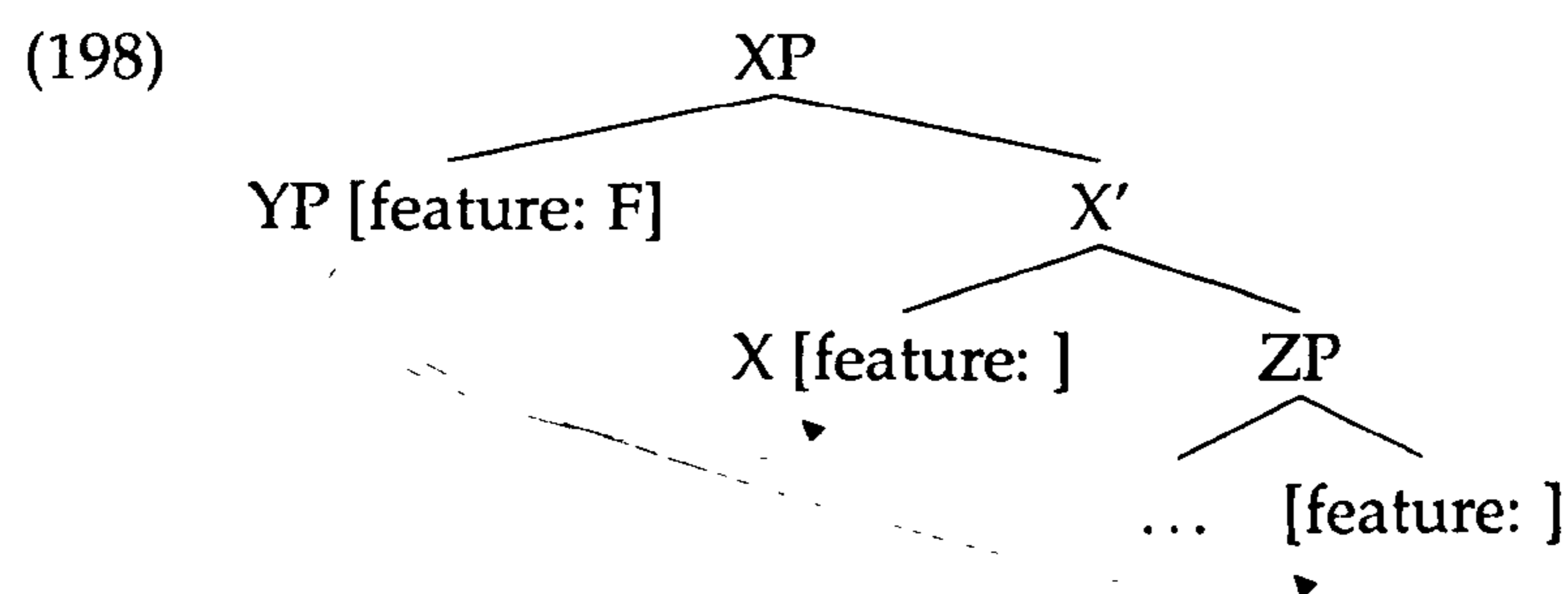
Following Chomsky (1999; 2000) I accept that Agree does not entail movement, unlike Chomsky (1995). Agreement and movement are distinct. Agree identifies the target of movement and its landing site, but an additional feature is postulated to induce movement rather than long-distance agreement. This is the [EPP] feature, which triggers re-Merge of the goal as a specifier of the probe. For the sake of simplicity, I will adopt the same view of head movement.¹ This is justified in a bare phrase structure. Instead of being a specifier of the probe, a lower head will adjoin to the probe by head adjunction.

¹Although various other approaches to head movement have been proposed, including the idea that it is a post-syntactic operation, applying at PF (Chomsky 1999).

Another important aspect of feature valuation is that it induces deletion of the features which have been valued. The derivation distinguishes between features which entered from the lexicon with a value, and features which have been valued during the derivation by Agree. As the derivation is sent to the PF and LF interfaces, each feature valued during the course of the derivation is deleted. There are two schools of thought on the timing of feature deletion. Chomsky (1995) claims that feature valuation and feature deletion are simultaneous, aspects of the same operation. However, in later proposals separate feature valuation and deletion (Chomsky 1999). Feature valuation happens during the derivation, whereas feature deletion is part of the process of spell-out which hands over the syntactic structure to the PF and LF interfaces. The timing of feature deletion depends on the timing of spell-out. The choice of approach has an empirical consequence. Under the view that feature valuation and deletion are simultaneous, features valued during the derivation cannot act as goals for subsequent Agree relations as they do not have the relevant features. Under the deletion at spellout model, feature valuation and deletion are not simultaneous, hence a feature valued by Agree can be a goal to a subsequent Agree relation, prior to spell-out, in exactly the same way as a feature can which emerges valued from the lexicon.

4.3.3 Syntactic operations and locality

In Chomsky (1999; 2000) Agree holds between pairs of features on the most local probe and goal. The probe values features of at most one (the closest) goal. Hiraiwa (2001), Frampton and Gutmann (2000) propose mechanisms for multiple feature checking. We will see that multiple feature checking is important in the account of multiple negation I propose. Hiraiwa (2001) proposes that a probe can Agree with all the active matching features it C-commands, provided no inactive feature of the same type intervenes between the probe and any of the active matching features. Frampton and Gutmann (2000) propose a similar account.



Agree is subject to strict locality conditions. These locality conditions have been the subject of much recent literature. Chomsky (1999) proposes to break the derivation into phases. Locality conditions then follow from the relations which hold between phases, and the way that phases of the derivation are passed to the interfaces. Completed phases are sent to the interfaces, rather than waiting for completion of the entire derivation before interface interpretation. This renders certain parts or phases of the derivation invisible to syntactic operations. Agree can only hold within material that has not been sent to the interfaces. Conditions on the amount of the derivation available to the computational system derive locality and successive cyclicity.

I will adopt Chomsky's phase-based approach. Chomsky (1999) claims that the syntactic derivation proceeds in chunks or phases, corresponding to the projections vP and CP. The computation cannot see all preceding phases. The number of phases available to the computation is restricted to the current phase, the previous phase and only the edge of the one before that. This proposal derives successive cyclic movement and locality effects such as subjacency, enforcing movement through the edges of phases (spec,vP and spec,CP) in cases of successive cyclic movement.

Phases which are inaccessible to the computation are invisible because they have already been handed over to the PF and LF interfaces by a process known as spell-out. Spell-out happens at the end of each phase: as a phase is completed, the previous phase is spelled out and becomes inaccessible to the computation. The Agree relation is bounded by the amount of the derivation which is accessible to syntactic operations.

4.4 A Minimalist approach to Jespersen's Cycle

Rowlett's (1998) approach lends itself to reformulation in a Minimalist framework in terms of morphosyntactic features. The hypothesis I will explore is that the morphosyntactic features associated with *ne* are different at stages one and two of Jespersen's Cycle. In keeping with the Minimalist framework, I propose that polarity is a morphosyntactic feature (see also Kato (2001), Martin-Gonzalez (2000) for other feature based Minimalist approaches). Every negative clause must have a polarity feature which has the value negative in an appropriate scope position. I will notate this feature as an attribute value pair polarity:negative or [pol:neg]. Rowlett's distinction between two types of *ne* is easily recast in these

terms. At stage one, *ne* emerges from the lexicon with both attribute and value [pol:neg]. It is sufficient to negate a clause on its own. At stage two *ne* is insufficient to negate a clause on its own. *ne* has a [pol:] feature, which is not valued in the lexicon, and therefore must be valued during the derivation in order for negation to be marked at LF and interpreted at the conceptual-intensional interface. This enforces the relation between *ne* and a secondary negator such as *not*, which has [pol:neg] in its lexical entry. There is a stage of the language in EME when both types of *ne* are available and the use of these two options is subject to variation (and competition, as I will show in chapter 5).

This approach captures Rowlett's idea that *ne* is not inherently negative. The idea of *ne* as a polarity item has been proposed by Ladusaw (1993), van der Wouden (1994), but my account allows this idea to be formalised within a Minimalist framework in which structure is built endocentrically to satisfy the featural deficiency of the head prior to the interfaces. The appearance of *ne* at stage two of Jespersen's Cycle is subject to syntactic licensing conditions, namely that it Agree with an LI bearing a [pol:neg] feature. Merge of *not* in a specifier-head configuration meets this requirement. This approach preserves Rowlett's ideas, but instead of *ne* being licensed by a particular configuration in NegP, *ne* is licensed in a particular feature checking configuration. At this stage of the discussion, it is not clear whether feature checking requires the functional projection NegP. Phrase structure configurations are not of primary importance in the Minimalist framework. I will explore the consequences of my proposals for the representation of negation using NegP in section 4.5.

In broad descriptive terms, the negative marker *ne* becomes part of the verbal morphology, with no intrinsic meaning of its own at LF, a little like verbal agreement morphology. Verbal agreement morphology is interpretable on the subject, which is the specifier of some verbal projection, rather than the verb itself. Similarly, negation becomes interpreted on a specifier of some verbal projection rather than on the verb itself. The next issue to examine is whether a correlation can be established between changes in morphosyntactic features and changes in the phrase structure of negation which eliminates the need for the null elements required by Haegeman's and Rowlett's approaches. Suggesting that the phrase structure of negation is subject to parametric variation goes further than Rowlett (1998) who argues for an underlying operator-head construction in all negative clauses. Rowlett takes this approach in view of Relativised Minimality (Rizzi 1990). Rizzi observes that negatives form weak islands barring wh-movement

across them. His analysis of weak island effects is based on the idea that negatives and *wh*-phrases are operators which occupy A'-positions, and thereby prevent A'-movement across them.

Minimalist accounts of negation, such as the one I propose here, or the one proposed by Brown (1999) do not maintain that negation is always an XP operator in an A'-position. Therefore, an alternative analysis of Relativised Minimality is required which does not make reference to operators in A'-positions. Manzini (1998) proposes a modification to the Minimal Link Condition (Chomsky 1995, 311) which derives weak island constraints in terms of features, by grouping features such as *wh*- and *neg*-features into a superset of operator features, each of which interacts with the others under the Minimal Link Condition. In the case of negative islands in *wh*-constructions, the presence of an intervening negative feature prevents agreement between C and the *wh*-phrase (199).

(199) Why didn't he say he was fired? (**why* = for what reason was he fired)

Other accounts of weak island constraints have been proposed based on semantic or scope properties of certain features or lexical items, or on discourse or pragmatic properties. If these proposals are on the right lines, then a null operator in *spec,NegP* is not required to derive weak island constraints under Relativised Minimality. In clauses which have [*neg*] features on a head, the only motivation for a null element in *spec,NegP* is to derive island constraints. To the extent that other ways to derive island constraints are plausible, such as Manzini's feature based proposal, a null *spec,NegP* operator is not required. Therefore, it might be possible to claim that the alternation in the position of [*pol:neg*] features under Jespersen's Cycle leads to parametric variation in the phrase structure of negation, if a negative specifier is not required at stage one of Jespersen's Cycle.

This view of Jespersen's Cycle differs from previous approaches as it is change in the morphosyntactic specification of *ne* which drives Jespersen's Cycle forwards. It allows Jespersen's Cycle to be parametrised in a new way. Furthermore, Jespersen's Cycle can be derived by grammatical competition (Kroch 1989). In the original formulation proposed by Kroch (1989), grammatical competition involves structurally incompatible forms. This is a problem to Frisch's analysis of Jespersen's Cycle under the *Neg*-criterion. For him, *ne* and *not* cannot be structurally incompatible, as they co-occur. Frisch (1997) is forced to diverge from the account of grammatical competition proposed by Kroch (1989). My proposals distinguish two forms of *ne* at successive stages of Jespersen's Cycle. These are

both heads (as I argued in chapters 2 and 3), which only differ minimally in one morphosyntactic feature. Therefore they are structurally incompatible and meet the conditions for grammatical competition. In chapter 5 I discuss morphosyntactic variation and competition in more detail, and develop a diachronic model of Jespersen's Cycle based on this hypothesis.

4.5 Implications of the analysis of Jespersen's Cycle for the phrase structure of negation

This section will develop some issues for the phrase structure of negation which arise out of my proposals. Most of the literature on negation in the Principles and Parameters framework assigns negation to its own functional projection NegP, following Pollock (1989). This section will examine the justification for NegP in a Minimalist theory based on bare phrase structure. I will compare the motivation for NegP under a Neg-criterion approach to the motivation for NegP under the proposals I outlined in section 4.4. The availability of NegP might be parametrised along with the expression of negation under Jespersen's Cycle rather than being a universal category in all languages. This idea is supported by the distribution of negation in German, Dutch and the Scandinavian languages. In these languages, the negatives *nicht*, *niet*, *ikki* are phrasal, and behave like VP-adjuncts rather than specifiers of a functional projection. There is no evidence for a negative head in these languages. In contrast, the existence of *do*-support in Present Day English is taken as evidence for a negative head, and hence for NegP in Present Day English. I will examine evidence for NegP in earlier stages of English.

4.5.1 Evidence for NegP as the locus of negation in early English

We have already seen that negation is not universally expressed by a specifier-head relation. The Neg-criterion is a parametrised and variable, a feature-checking relation applying at a particular stage of Jespersen's Cycle. There is only overt evidence for co-occurrence of negation on both a head and specifier at stage two of Jespersen's Cycle. Languages at stage three of Jespersen's Cycle, have an adverbial negator (German *nicht*, Norwegian *ikki*, Dutch *niet*), whose distribution does not provide any evidence for NegP. In chapter 2, I demonstrated that the position of negation is indistinguishable from the position of discourse adverbs, adjoined

to vP. Although we can disambiguate the morphosyntactic feature configurations at stages one and two of Jespersen's Cycle, stage three is more problematic. At stage three of Jespersen's Cycle the position of *not* is ambiguous between an unselected vP adjunct as in German, or a selected element which checks the [pol:] feature of a null negative head. The problem is particularly difficult because I showed in chapter 2 that the position of secondary negator *not* is the same as the vP adjunct position which discourse and temporal adverbs occupy.² NegP is not necessary in most languages with phrasal negators once stage three of Jespersen's Cycle is reached. In morphosyntactic feature terms, there is no evidence for polarity features on a head, or for any Agreement relation between head and specifier elements. In the absence of such evidence, the easiest route for the language learner is not to have a negative head in his or her inventory of negative lexical items, but to treat *not* as an unselected vP adjunct.

Late Middle English might be included in the group of languages which have negative markers which are unselected vP adjuncts. The issue hinges on the question of whether loss of *ne* is phonological, leaving a [pol:] feature in place on a head, or whether the loss of *ne* is a structural change which eliminates both the [pol:] feature and its morphological realisation. If the former, then *not* remains selected by a head for the purpose of morphosyntactic feature checking. If the latter, then there is no dependency between a head and *not*. The latter approach does not posit a morphosyntactic dependency where there is no overt morphological evidence for one.

In languages which only mark negation on a head, it is not clear that negation must project a separate head Neg⁰, as it is the feature [pol:neg] which marks negation, rather than a particular phrase structure configuration. This [pol:neg] feature may be located on a projection of the verb. The link between sentential negation and propositionality indicates that the [pol:neg] is located on a head associated with tense (T⁰) or event structure (v⁰).³

²However, it is well known that the behaviour of *not* at later stages of Modern English is different from its German counterpart *nicht*. The set of verbs which co-occur with negation in PDE is restricted to *be*, *have*, modals and *do*, which Han and Kroch (2000) categorise as a modal. A full discussion of this pattern, or its development in Early Modern English is outside the scope of this thesis. However, the interaction of negation and modality in PDE has been used as an argument that *not* is a specifier of NegP (Pollock 1989, Ouhalla 1990) (see section 1.3.1 for a discussion).

³Eythorsson (2002, 220, note 18) notes that the Gothic negative *ni*, which is the 5-7th century Germanic precursor of Old English *ne*, can appear separated from the finite verb by clitics. This indicates that *ni* is a syntactic clitic (X⁰/XP category) in Gothic, rather than a prefix on the finite

Still further, in clauses which have a negative head element and a negative specifier element, it is not clear that a separate projection is required to accommodate agreement between the two negatives. Under Minimalist bare phrase structure theory (Chomsky 1995; 2000) there is no one to one correspondence between specifier and head. Specifiers are created to check the features of a head by Move or Merge. If a head has more than one feature which needs to be checked, it will have multiple specifiers. Conversely, if the head has no uninterpretable features, it will not project a specifier.

Within the formal framework of Minimalism, a separate Neg⁰ head is not required at any stage of Jespersen's Cycle, unlike in earlier X'-theory approaches. In principle, [pol:neg] features could be part of the feature specification of any functional head. Furthermore, there is no reason why the feature checking between *ne* and *not* requires a distinct negative projection for the dependency to hold. Just as the valued [pol:neg] feature could be part of the lexical entry of any functional head, unvalued [pol:] features could also be part of the feature specification of any functional head, provided we allow for the checking of [pol:] features in a multiple specifier configuration.

The dependency could hold between a negative T⁰ or v⁰ with [pol:] and *not* [pol:neg] in an outer spec,TP or spec,vP position. However, invoking a multiple specifier configuration to deal with bipartite negation may result in problems ordering *not* with respect to the other specifiers of T or v such as the subject which originates in spec,vP, and moves to spec,TP to check ϕ -features and case. In order to derive the two observed orderings of negation and subjects, the subject must occupy the inner specifier position of v or T whilst negation must occupy the outer specifier.

4.5.2 Morphosyntactic features and the phrase structure of negation

My proposal to assign *ne* the feature [pol:] impacts on the viability of PolP/NegP as an independent projection. At stage two, *ne* serves only to initiate a dependency leading to Merge of *not*. Jespersen's Cycle offers no motivation for assigning other additional features to *ne*. This is consistent with the role of *ne* as

verb. However, the Old English distribution of *ne* is consistent with its being a prefix on the finite verb in the lexicon. There may be a diachronic change in the status of the negative marker here at an earlier stage of Jespersen's Cycle.

a negative agreement marker on the finite verb, and aligns the status of *ne* with agreement morphology (which is uninterpretable on the finite verb and its associated heads, and interpretable on the subject). Given that NegP has the same status as AgrP at stage two of Jespersen's Cycle, consisting of uninterpretable features, the existence of NegP/PolP is largely a matter for the syntactic theory adopted in the same way AgrP is. The representation of agreement morphology depends on the view taken of the morphology-syntax mapping.

In a Minimalist framework, it is unclear whether heads consisting entirely of uninterpretable features can have an independent existence in syntax and project (Chomsky 2000, 138-9):

In *MP* [The Minimalist Program] it is speculated that categories lacking interpretable features should be disallowed - specifically Agr, consisting only of uninterpretable ϕ -features. That conclusion is forced in this version. Suppose α is an LI that consists of uninterpretable features only and selects β , yielding the syntactic object $K=\alpha,\beta$ with label α . In the course of a convergent derivation, α will disappear, leaving K and higher projections of α without a label. But terms without labels are not well-formed syntactic objects. Accordingly such elements as Agr not only might not exist, but cannot exist, on rather plausible assumptions.

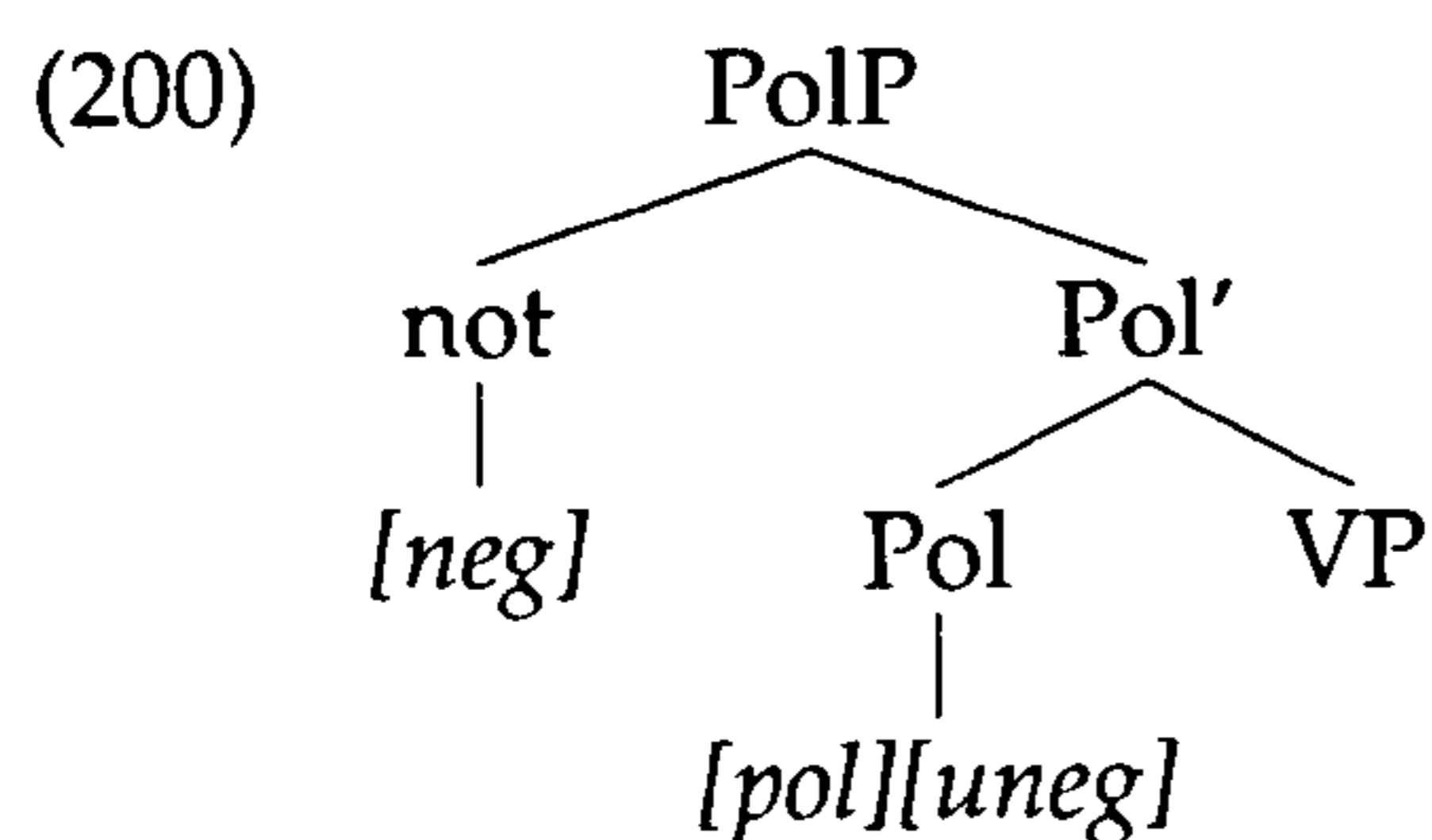
(Chomsky 2000, 138-9)

This can be seen to be a problem for *ne* if Chomsky's formalism is made concrete by substituting *ne* [pol:] for α and *not* or *pas* [pol: neg] for β .⁴

If Chomsky's proposal is to be taken seriously, it constrains the syntactic representation of negation at stage two of Jespersen's Cycle. The [pol:] feature must be accommodated on a projection which has interpretable features. I envisage two solutions to this problem. The first is to ensure that, in addition to [pol:], *ne* has an LF interpretable feature of some sort, which allows it syntactic independence. The problem here is to determine what else *ne* might be specified for in addition to negation. One reason for assigning elements to functional projections in the first place is that they convey only limited, grammatical functional, meaning. However, Martin-Gonzalez (2000), Kato (2001) argue that two features are

⁴Chomsky (2000) makes his remarks in view of Agr. Ouhalla (1990, 191) draws a parallel between the phrase structure of Neg and the phrase structure of Agr: both have an abstract head which licenses an overt specifier. The conceptual parallel is increased if bipartite negation is a kind of negative agreement.

involved in the expression of sentential negation: a negation [neg] feature, and a polarity feature [pol]. Martin-Gonzalez argues for a configuration of features [pol, uneg] on an independent head. The interpretable [pol] feature allows projection of PolP, as an independent projection in the syntax, whilst the [uneg] feature establishes the syntactic dependency with *not* required at stage two of Jespersen's Cycle (200).



The biggest problem with this analysis is that the motivation for the [pol] feature appears to be theory-internal. The patterns of negation at stage two of Jespersen's Cycle offer no empirical evidence for this feature. It is not clear whether the interpretable [pol] feature has any syntactic independence on a head position or what its role at LF would be, given that polarity is also marked by negative features.

The second approach is to assign the [pol:] feature to another head which has independent existence. A good candidate, which derives the appropriate position for *not* is *v*. Checking must be carried out in a multiple specifier configuration, with *not* or *na* in the outer specifier. The positions of negators are indistinguishable from the positions of TP or *v*P adjoined adverbs. Hence this approach seems a promising way to eliminate PolP. Chomsky (1999) suggests that *v*P can have more than one specifier, the inner specifier an A-specifier, the outer one an A'-specifier. *v*P also constitutes a syntactic phase in Chomsky's (1999) model. In the syntax, negation appears at the phase edge. This aligns it with other affective operators such as *wh*-operators, which are subject to successive cyclic locality constraints.

Whilst interesting, Chomsky's proposal is not the only perspective through which to view the question of NegP. Bobaljik (1995), Bobaljik and Thrainsson (1998) take each morpheme to correspond to a functional head in the syntax, continuing the Government-Binding approach to functional projections. This is the approach which underpins Haerberli's clause structures for early English. If I admit AgrP on the basis of overt agreement morphology as Haerberli (2002b) does, following Bobaljik and Thrainsson (1998), I am forced to admit NegP on the basis

of the negative morpheme *ne*. The loss of overt morphological evidence (*ne*) for the negative head has potential to induce syntactic changes in the representation of negation, in the same way that Bobaljik and Thrainsson (1998) demonstrate that loss of overt agreement morphology entails changes in verb movement, loss of a subject position, and loss of object movement possibilities. However, it is not clear that loss of the overt head *ne* has any visible effect on the distribution of *not* in Middle English.

Finally, both NegP and AgrP may be analysed as Proxy Projections (Nash and Rouveret 1997), created for the purpose of checking features only. A similar approach follows from Giorgi and Pianesi's *Feature Scattering Principle*.

- (201) *Feature Scattering Principle*: Every feature can head a projection
Giorgi and Pianesi (1997, 231)

Under both approaches the [pol:] feature on v^0 will project Neg^0 solely to provide a specifier position in which [pol:] can be valued by *not* [pol:neg]. These approaches eliminate multiple specifiers, as each feature which is valued heads its own functional projection. Only unvalued features need to project in order for checking or valuation to occur in a spec-head configuration. Following this approach to its logical conclusion, NegP is only present as a syntactic (proxy) category at stage two of Jespersen's Cycle when the expression of negation involves morphosyntactic feature checking. At stage one [pol:neg] is a feature of v^0 . At stage three [pol:neg] is a feature of an unselected vP adjunct. Whilst these approaches correlate variation in the phrase structure of negation with its morphosyntactic features, providing an account of parametric variation in the phrase structure of negation, they face the same problem which the multiple specifier approaches face. Under both these approaches, feature checking operations must be ordered in order to generate the observed morphological and functional hierarchy, whether or not each unvalued feature projects its own functional head.

4.5.3 Summary: the phrase structure of negation

In this section, I showed that there is no concrete evidence that the functional projection NegP is necessary or present in all negative clauses. Whether or not one makes reference to NegP depends on the approach one takes to functional structure. My account of Jespersen's Cycle draws parallels between NegP at stage two of Jespersen's Cycle, and AgrP. Both are checking positions whose heads have no interpretable features. In this way, Agr^0 and Neg^0 differ from the functional

heads which Chomsky (1995; 2000) labels Core Functional Categories (CFCs): C, T, v. These have important semantic contributions to the clause. v introduces event structure, aspect, and existential closure over the predicate. T provides temporal anchoring for the proposition. C encodes properties such as force and pragmatic or information structure information such as focus. A semantic justification is only available for a negative head at stage one of Jespersen's Cycle, when it actually introduces negation. At subsequent stages, the role of the negative head, if present, is as a morphological marker of negation rather than a semantic one.

At stage one of Jespersen's Cycle, there is no reason why *ne* should not be an independent head, dominating v or T. However, early English offers no evidence to dissociate the negative head from the aspectual head v^0 or temporal head T^0 .

At stage two of Jespersen's Cycle, a checking relation holds between a head with [pol:] and an XP with [pol:neg] features. Under X'-theory, this configuration requires its own projection, with a single specifier and a single head. The same is not true under bare phrase structure theory, which admits multiple specifiers. Alternatively, neg-feature checking can occur in a proxy projection which is created specifically for the purpose of checking (under the approaches proposed by Nash and Rouveret (1997), Giorgi and Pianesi (1997)). In the latter case, we can see that the nature of NegP differs from Chomsky's Core Functional Categories. The role of NegP, like AgrP, is purely syntactic unlike C, T, v which are crucial for propositional semantics. The features of the proxy head Neg^0 will be checked and deleted at spell-out. Once the [pol:neg] feature is no longer present on a head *ne*, *ne* no longer has any role in LF interpretation.

4.6 Redundant Negation

This chapter discussed syntactic analyses of Jespersen's Cycle and their implications. I proposed that there are two types of *ne* in early English, and that competition between them drives Jespersen's Cycle. We will see in this section that the behaviour of *ne* in redundant negation supports a distinction between two forms of *ne* which differ in syntactic and semantic properties at successive stages of Jespersen's Cycle.

In this section, I discuss the syntax of redundant negation in early English (also termed 'paratactic negation' (Jespersen 1917), and 'expletive negation' (van der Wurff 1999b)). I refer to the phenomenon here as redundant negation. I distin-

guish two patterns of redundant negation in early English on both synchronic and diachronic bases. The ME distribution of *ne* in redundant negation distinguishes it from OE *ne* and ME *not*. One pattern of redundant negation emerges in ME and only involves *ne*, so that ME *ne* appears in one context where no other sentential negators appear. The other pattern of redundant negation is productive throughout OE, ME and Early Modern English and involves the full range of sentential negators available at each stage of early English. These two patterns inform discussion of the syntax of *ne* and support my claim that there are two distinct forms of *ne* in early English.

Data for this section are taken from the literature on redundant negation as well as the YCOE and PPCME2 corpora. In order to supplement the small number of examples found in the corpora the following sources of examples were also used to construct a database of examples: the *Oxford English Dictionary*, the *Middle English Dictionary*, Mitchell (1985), Baghdikian (1979), van der Wurff (1999b), Jack (1978a), Iyeiri (2001), Warner (1982).

4.6.1 Patterns of redundant negation in early English

Van der Wouden (1994, 107) defines redundant or paratactic negation as:

... various languages and dialects show the effect that a verb (or something else) of negative import triggers a superfluous negation in a subordinate clause. ... Paratactic negation falls apart into two subtypes: the elements with 'negative import' either trigger the occurrence of one or more negative morphemes in their complement clause, or they select a special type of complementiser that may or may not be homophonous to a negation operator.

(van der Wouden 1994, 107)

Present Day English does not permit either of these two types of redundant negation, but both are attested in earlier stages of English following certain verbs. (202-205) exemplify Wouden's first type of redundant negation, with a full range of negative markers used redundantly, including OE *ne* (202), ME *not* (203), Early Modern English *not* (204), as well as negative quantifiers (205). These examples show that redundant negation is not restricted to occur with particular negators or at particular points in Jespersen's Cycle.

- (202) He þa opsoc þæt he hit nære
 He then denied that he it NEG-was
 'He then denied that it was he'
 (Aelfric Lives of Saints XXX, 23)
- (203) Now sithen he deffendeth that man sholde nat yeven to his broother ne
 Now since he forbids that man should not give to his brother nor
 to his freend te myght of his body
 to his friend the might of his body
 'Now, since he forbids man to give his brother or friend power over his
 body'
 (Chaucer, Melibee 1756).
- (204) You may deny that you were not the meane of my Lord Hastings late
 You may deny that you were not the means of my Lord Hastings late
 imprisonment
 imprisonment
 'You may deny that you were the means of my Lord Hastings late impris-
 onment'
 (Shakespeare, Richard III, I.ii.502-503)
- (205) Nature deffendeth and forbedeth by right that na man make hym self
 Nature prohibits and forbids by right that no man make himself
 riche vn to the harm of another persone
 rich in to the harm of another person
 'Nature prohibits and forbids by right that any man should make himself
 rich at the expense of another person'
 (Chaucer, Melibee, B. 2774)

The negative complementiser *þæt ne*, which Jack (1978a, 66) argues is modelled on Latin *quin* exemplifies Wouden's second type of redundant negative marker (206).

- (206) a. And so we mai not denye þat ne Crist and his eldris weren pore
 And so we can not deny that Crist and his parents were poor
 folk...
 people...
 'and so we cannot deny that Christ and his parents were poor peo-
 ple...'
 (Wycliffe Sermons, i.246.3)
- b. And Cristen men han noo doute þat ne Joon was verry Maries
 and Christian men have no doubt that John was truly Mary's

sone, and þis Marie was his modir;...
 son and this Mary was his mother;...
 'and Christian men have no doubt that John was truly Mary's son and
 this Mary was his mother,...'

(Wycliffe Sermons, ii.128.26)

The triggering contexts for Old and Middle English redundant negation are predicates of prohibition, denial and doubt. van der Wurff (1999b, 297) observes that the set of verbs which license redundant negation in earlier English resists precise syntactic categorisation. They comprise a subset of verbs of negative import, but redundant negation is not licit with all verbs of negative import such as *hate*, *dislike*, or negated verbs such as *not say*, *not think*. The set of verbs which license redundant negation are the same set of verbs which license negative polarity items (NPIs) in their complement clause.⁵ Van der Wouden (1994, 108) characterises the contexts for redundant negation semantically, as downward monotonicity contexts. In syntactic terms, the potential to license redundant negation can be analysed as a subcategorisational requirement of particular verbs. For the sake of the exposition here, I will refer to predicates which license redundant negation as 'adversative' following van der Wurff (1999b). In addition, ME redundant negation appears in comparatives or following certain complementisers which have negative import (207, 208).

- (207) And thanne thilke thing that the blake cloud of errour whilom hadd
 and then the-same thing that the black cloud of error formerly had
 ycovered schal lighte more clerly than Phebus hymself ne shyneth
 covered will light more clearly than Phoebus himself ne shines
 'And then the same thing that the black cloud of error had covered in the
 past will light up more clearly than Phoebus himself shines'
 (Chaucer, *Boece* III M.11,10, van der Wurff (1999b, ex.8))
- (208) ther bihoveth greet corage agains Accidie lest that it ne swolwe the
 there is-needed great courage against sloth lest that it ne swallow the
 soule by the sin of sorrow
 soul by the sin of sorrow
 'Great courage is needed to fight sloth, lest it swallow up the soul by the
 sin of sorrow'
 (Chaucer, *Parson's Tale* 731, van der Wurff (1999b, ex.9))

⁵With one important difference. A main clause negative is sufficient to license NPIs in a complement clause with any verb: *I didn't say that I would do anything about it*, but redundant negation is only licensed by a particular subset of verbs.

4.6.2 Two types of redundant negation in early English

There are two types of redundant negation in early English, which are distinguished both by properties of the main clause licensing context and by the negators used redundantly in the complement clause.

Redundant negation is attested with a full range of negatives in clauses where the matrix licensing predicate is non-negative: with OE *ne* (209), with ME *not* (210) and in Early Modern English, also with *not* (211). This form of redundant negation is attested throughout the early English period, from Old English to Early Modern English.

- (209) *ðeah for eaðmodnesse wandiað ðæt hi hit ne sprecað*
 yet for humility hesitate that they them NEG preach
 'yet for humility they hesitate to preach them'
 (CP 117.13)
- (210) *Bochas forbade husbandes without prefe not to leve to sone their*
 Bochas forbade husbands without proof not to leave too soon their
 wyves
 wives
 'Bochas forbade husbands without proof to leave their wives too soon'
 (c. 1430-40, Lydg. *Bochas* (1554) 22b)
- (211) *She silly Queene forbad the boy he should not passe those grounds*
 She silly Queen forbade the boy he should not pass those grounds
 'She, silly Queen, forbade the boy to pass those grounds'
 (1599 Shaks, *Pass Pilgr.* 124)

In ME, we find redundant negation in the complement clauses of adversative predicates which are themselves under the scope of sentential negation in the main clause (212).

- (212) a. *ne doute the nat that alle thinges ne ben don aryght*
 NEG doubt you not that all things ne are don rightfully
 'Do not doubt that all things are done rightfully'
 (Chaucer's *Boethius* IV P5,49)
- b. *Certes...it nys no doute that it nys right worthy to ben*
 Truly...it NEG-is no doubt that it ne-is truly worthy to be
 revered
 revered
 'Truly, there is no doubt that it is worthy of reverence'
 (Chaucer, *Boethius* 3, pr.9.42)

There are reasons to believe that redundant negation under non-negative and negative matrix predicates is not the same phenomenon. First, redundant negation under a negated predicate is only productive in Middle English, unlike the other pattern of redundant negation which continues to be productive into the Early Modern English period. In Old English, redundant negation with *ne* is found (n=12), but *ne* usually follows a non-negative adversative predicate (209) (n=9). In my database of examples, there are only 3 Old English examples of *ne* in the complement of a negated predicate (213), compared with 32 Middle English examples of the same construction (215).

- (213) foþon nis nan tweo þæt he forgifnesse syllan nelle
 although NEG-is no doubt that he forgiveness grant ne-will
 'although there is no doubt that he will grant forgiveness'
 (BIHom 65.8)

Second, the negator *ne* is almost always used to mark redundant negation in the complement clause of a negated predicate, even in LME when the typical sentential negator is *not*. There is only one exception in which *not* is used redundantly in the complement clause of a negated matrix verb⁶ (214). This is 1 of a total 36 examples, and is also the latest example of this type, dating from 16th century Early Modern English.

- (214) nor does not doute that it is not the feet's office
 nor does not doubt that it is not the feet's office
 'nor does not doubt that it is the feet's office'
 (Queen Elizabeth's *Boethius* P2,38, (Baghdikian 1979))

In LME the two redundant negation contexts are clearly distinct: in the complement clause of a negated predicate the redundant negative is always *ne* (215). Other redundant negation contexts mark redundant negation using *not* (216).⁷

⁶This is in an Early Modern English translation of the *Boethius* from French. Patterns of redundant negation in French rather than those of English may provide the model for this example and account for its anomalous appearance.

⁷The last example of redundant *ne* I have found with a non-negative adversative predicate dates from c.1275 (i). The last examples of *ne* in the complement of a negated adversative predicate date from the 15th century.

- (i) Iesus hire þo for-bed þæt heo attryne ne sceolde his hond ne his fet
 Jesus her though forbade that she bind ne ought his hands nor his feet
 'though Jesus forbade her to bind his hands or his feet'

- (215) no man douteth that he ne is strong in whom he seeth strengthe
 no man doubts that he *ne* is strong in whom he sees strength
 'No one doubts that that person is strong in whom he can see strength'.
 (Chaucer Boece II, Pr.6, 93-4)
- (216) Now sithen he deffendeth that man sholde nat yeven to his broother ne
 Now since he forbids that man should not give to his brother nor
 to his freend te myght of his body
 to his friend the might of his body
 Now, since he forbids man to give his brother or friend power over his
 body'
 (Chaucer, Melibee 1756)

Jack (1978a) identifies redundant negations which are dependent on a negative matrix predicate as one of the last contexts to lose *ne* in Middle English. Examples of redundant negation following a negated matrix predicate seem to emerge at the same time as bipartite negation at stage two of Jespersen's Cycle, and are lost with the loss of supported *ne* in LME at stage three of Jespersen's Cycle. The period of productivity for redundant negation in the complement of negated predicates corresponds to stage two of Jespersen's Cycle. The distribution of *ne* in redundant negation divides instances of *ne* into two types at successive stages of Jespersen's Cycle: Old English *ne* appearing in the complement of a non-negative predicate (217) and the Middle English *ne* appearing in the complement of a negated predicate (218).

- (217) ða wiðsoc Crist swiðe rihtlice þæt he deofol on him næfde
 then denied Christ very rightfully that he devil in him ne-had
 'then Christ denied very rightfully that the devil was in him'
 (AECHom ii. 230.1)
- (218) Certes...it nys no doute that it nys right worthy to ben revered
 Truly...it NEG-is no doubt that it ne-is truly worthy to be revered
 'Truly, there is no doubt that it is worthy of reverence'
 (Chaucer, Boethius 3, pr.9.42)

Van der Wurff (1999b) makes a similar distinction between two redundant negation contexts. He distinguishes polarity shift (216) and expletive negation proper (215). However, he does not distinguish the two types according to the

(c. 1275 Passion 581 in OE Misc 53)

polarity of the matrix predicate, or take account of the changing distribution of *ne*. A change in the polarity of the licensing contexts for redundant *ne* indicates a change in the syntax of *ne*. Whilst non-negative adversative predicates select negative complements containing a sentential negator such as ME *not*, negative adversative predicates do not. They take complements with *ne* at a time when unsupported *ne* is not a productive negative marker. The constructions with LME *ne* are instances of non-local multiple negation. The question is how *ne* comes to appear in multiple negation at this period.

Evidence from the distribution of *ne* in redundant negation contexts supports the distinction I proposed between two types of *ne*. In Middle English, redundant *ne* appears in non-local multiple negation across a clause boundary. The appearance of redundant *ne* in non-local multiple negation shows that *ne* is insufficient to mark negation on its own in the complement clause. It appears when licensed by another negative. The availability of this new context for ME *ne* is further evidence of the competition between two types of *ne* which I proposed for Middle English: one type of *ne* has morphosyntactic features which give it a negative interpretation, the other has features which mark it for polarity, rather than negation, and which require *ne* to be licensed by another negative. The first *ne* cannot appear in non-local multiple negation. The second can. Hence the growing availability of non-local multiple negation in ME marks a change in the syntax and semantics of *ne* which is concurrent with change under Jespersen's Cycle and arguably part of the same change as the one which drives Jespersen's Cycle.

Whilst the syntax and semantics of LME *ne* differs from earlier *ne*, LME redundant *ne* cannot be included in the class of negative polarity items (NPIs) as the conditions on NPIs and redundant *ne* differ. These differences are problematic to van der Wouden's (1994) account. He exploits the fact that adversative predicates license both NPIs and redundant negation to claim that redundant negatives are NPIs. However, the context for ME redundant *ne* is different from the context for *any*-NPIs in English. NPIs are licensed in the complement clauses of negative and non-negative adversative predicates even in PDE (219), whereas ME *ne* is only licensed in the complement clauses of negated predicates. Even in the clausal complements of adversative predicates, ME *ne* requires the presence of negation in the main clause unlike PDE NPIs. This indicates that the distribution of ME *ne* is not that of an NPI. Its licensing conditions are more specific.

- (219) a. I forbid anyone to do that
 b. I don't forbid anyone to do that

4.7 The relationship between NegV1 and Jespersen's Cycle

This section will return to consider the relationship between negative initial clauses and Jespersen's Cycle. I now have accounts of both in terms of morphosyntactic features. For an account of Jespersen's Cycle see section 4.4 of this chapter. In chapter 3, I gave good reasons to doubt that NegV1 and secondary negators were in complementary distribution as van Kemenade (2000), Ingham (2005) claim. This section will examine ways in which the apparent independence of NegV1 and Jespersen's Cycle can be accommodated.

Eythorsson (2002) proposes to derive negative initial clauses by a [+neg] feature⁸ on C^0 . In the framework of valued and unvalued features I adopt here, this feature equates to unvalued [pol:] on C^0 . Movement of the negated finite verb to C^0 will only be possible when *ne+V* has valued [pol:neg] features at the point when C^0 probes, allowing *ne+V* to be the goal of Agree. The secondary negator *not* never moves to C^0 , even though it takes over the role of negative marker at stage two of Jespersen's Cycle and has [pol:neg] features. The data I presented in chapter 3 showed that *ne+V* continues to move to C^0 even in EME clauses with *not*.

4.7.1 A feature based account: Ingham (2005)

Ingham (2005) adopts Eythorsson's feature checking account of NegV1. He also adopts a version of Rowlett's account of Jespersen's Cycle in which [+neg] features shift from head to specifier position of NegP at stage two of Jespersen's Cycle. His claim regarding the loss of NegV1 is simple. Once the [pol: neg] feature is no longer marked underlyingly on the head *ne*, *ne* lacks the features which will check the features of C^0 and which allow *ne+V* to head adjoin to C^0 . At stage two of Jespersen's Cycle, *ne* is valued negative during the derivation by checking against *not* [pol:neg]. The [pol: neg] feature which *ne* inherits by checking

⁸Eythorsson claims the existence of negative complementisers as supporting evidence for this view. Middle English *þæt ne* 'that not' is an example of a negative complementiser, albeit one which is not widely attested outside the works of Wycliffe. The distribution of *ne* in the *þæt ne* construction is different from other instances of *ne*. It is separated from the finite verb, and precedes the subject in subordinate clauses. It also never appears unsupported, without another negative in the subordinate clause, so is an instance of my [pol:] rather than having negative features of its own.

against *not* is deleted as part of the feature valuation process, so that *ne* does not have a [pol:neg] feature at the point where C⁰ [pol:] is merged and probes for an Agreeing goal.

One question is why loss of [pol:neg] on *ne* should lead to the loss of negative initial clauses rather than a switch in the target of movement from *ne+V* to the secondary negator *not* which has a [pol:neg] feature. There is no evidence for fronting of *not* in Middle English. The empirical predictions concerning the interaction of NegV1 and Jespersen's Cycle which arise out of Ingham's account are not borne out either. His account predicts that NegV1 and secondary negation should be in complementary distribution (a similar prediction also arises out of van Kemenade's analysis, although for different reasons). I showed in chapter 3 that NegV1 is at least as frequent in clauses with *na* and *not* as in clauses without *na* and *not*. Ingham gets around this problem by arguing that the grammaticalisation of *not* as a secondary negator postdates the loss of NegV1. Hence OE *na* and EME *not* are adverbs. There is no independent basis for this distinction between adverbs and secondary negators.⁹ The distinction between sentential negator and adverb status hinges on Ingham's analysis of NegV1. In section 4.7.2, I will present an alternative account of the loss of NegV1 which is independent of Jespersen's Cycle, in accordance with the findings of chapter 3, and does not require a distinction between adverb *not* and sentential negator *not* to be made in EME, for which there is no independent basis (see chapter 2).

Ingham's conclusion that *not* is reanalysed as a secondary negator in LME leaves the increasing frequency of EME *not* unmotivated. If *not* is an adverb at this period we might expect its use to be variable, but we have no reason to expect its use to increase during the period. The frequency of adverb *not* will be constrained by the availability of contexts for the adverb. Whilst the availability of contexts for adverb *not* may vary over time, there is no reason to expect a steady increase over time unless it is grammaticalised as a negative marker, which is what we see in the case of *not*. On the other hand, if *not* is reanalysed with a [+neg] feature in OE or EME, and begins to compete with *ne* [+neg] as an expression of sentential negation, its use will spread outside the original contexts

⁹Ingham argues that differences in the frequency of *not* according to clause type indicate that it is an adverb rather than a grammaticalised sentential negator. He assumes that grammaticalisation is only complete once the use of *not* is no longer different in main and subordinate clauses. I do not understand how this argument distinguishes adverbs and secondary negators, given that the grammaticalised *not* is potentially a more frequently used grammatical option in main clauses than subordinate clauses during the course of the grammaticalisation itself. See chapter 5.

for adverb *not* in the manner expected of an innovative form in grammatical competition. The reanalysis of *not* is the starting point for its diffusion by grammatical competition rather than the endpoint of the change. Whilst it is undoubtedly the case that the sentential negator *not* developed out of an adverbial use of OE *naw-ihht* 'nothing, in no way', I take issue with the late date proposed for the reanalysis by Ingham.

Ingham's account faces a theoretical problem too. He assumes that feature valuation and deletion are simultaneous, following Chomsky (1995). However, in later approaches, Chomsky (1999; 2000) dissociates feature valuation and deletion. Feature valuation happens when an appropriate probe-goal relation can be established. Deletion of features valued by Agree happens at spell-out when phases of the derivation are handed over to the interfaces for interpretation. Spell-out of each phase is delayed until a subsequent phase is completed, so that a vP phase is not spelled out until the CP phase which dominates it is complete.

The agreement between *not* and *ne* which endows *ne* with a [pol:neg] feature does not result in the deletion of [pol:neg] on *ne* until spell-out. Instead, *ne* has a valued [pol:neg] feature until the phase is spelled out. The [pol:neg] feature on *ne*, whether valued in the derivation or as part of the lexical entry, is the closest matching goal to C⁰ so will Agree with it and move to C⁰ by head adjunction.

Agreement between C⁰ [pol:] and *ne* [pol:neg] will happen in the same way whether the [pol:neg] features of *ne* originate in the lexicon or from a previous application of Agree with *not*. There is no way for subsequent derivational operations to distinguish between features valued in the lexicon and during the derivation. *ne+V* is equally accessible to an Agree relation with C⁰ [pol:] in either case. Deletion of valued features at spell-out only takes place after C⁰ is merged and has had a chance to Agree with *ne* and move *ne+V* to adjoin to C⁰. The valued features of *ne* will not be deleted until the phase is complete, after all unvalued features of C⁰ have been valued. Therefore, V to C movement of *ne+V* is equally possible at stages one and two of Jespersen's Cycle in a phase based spell-out model. This accords with the lack of evidence for a difference in the position of *ne+V* at the two stages of Jespersen's Cycle which I observed in chapter 3. However, it leaves open the issue of how and why NegV1 is lost in Early Middle English.

4.7.2 An alternative account

Under Chomsky's (1999, 2000) account of movement, a [pol:] feature on C^0 is not sufficient to trigger movement on its own. It will probe for a matching [pol:neg] feature on a goal, which must be active. For agreement between C^0 and *ne* to take place, *ne* must be active. That is, it must have an unvalued feature of its own, which is valued by matching with a feature on C^0 . The valued features of both probe and goal delete but not until spell-out at the phase level. Some mechanism is also required to derive head adjunction of *ne+V* to C^0 in cases of V to C movement, perhaps an [EPP] feature which targets the Agreeing goal, irrespective of its phrase structure status as XP or X^0 .¹⁰

One possible candidate for the feature which activates *ne* for movement is [focus], which Watanabe (2002; 2004) argues is the A'-system's analogue of structural case in the A-system, activating goals for Agree. However, the motivation for this feature is entirely theory internal. It is only posited for consistency with the framework in Chomsky (1999). More work remains to be done to establish whether the negation is focused in all NegV1 clauses.

Thus there are three changes which can account for the loss of NegV1: loss of the [pol:] feature on the probe C^0 , loss of the feature on *ne* which makes it an active goal for Agree, or loss of the [EPP] feature on C^0 , which will prevent movement of *ne* to adjoin to C^0 . On the basis of highly productive movement of topics or subjects to C^0 in ME main clauses, it is implausible to explain the loss of NegV1 by the loss of [EPP] on C^0 , which is independently needed to motivate topic and subject movement to spec,CP.

Loss of either of the other features on probe or goal is more likely. Given what we know about the morphosyntactic and phonological weakening of *ne* at the period, loss of the feature on *ne* which renders it active for Agree with C^0 is plausible. Negative movement to C will fail because there is no suitably active goal for C^0 [pol:] to Agree with. The only convergent derivations will be ones without C^0 [pol:]. Hence, loss of the active goal will force loss of the probe. The failure of *not* or other negatives to move to spec,CP follows if *not* and other negatives lack the features which activate them for Agree with C^0 . In a phase

¹⁰It should be noted here that the [EPP] feature is usually employed in cases of XP movement. Using the [EPP] feature to derive head movement is a tentative departure from standard Minimalist proposals. However, if we assume that features have primacy over phrase structure configurations, restricting the [EPP] to XP movement seems arbitrary. It can be used to derive movement of an element in an Agree relation irrespective of that element's phrase structure status.

based spell-out model, a difference between *ne* [pol:neg] and *ne* [pol:] cannot have a role. At the point when C⁰ [pol:] is merged, both types of *ne* have the feature [pol:neg].

The temporal association between loss of NegV1 and the introduction of *not* is accidental. Under the phase based spell-out model it is difficult to see how a causative link could be established between the two changes. This fits well with my findings concerning the distribution of NegV1 and Jespersen's Cycle (chapter 3). The two changes are formally independent, but both are aspects of the morphosyntactic weakening of *ne* which happen at this time.

4.8 Summary and Conclusions

This chapter proposed a Minimalist analysis of Jespersen's Cycle which develops proposals made by Rowlett (1998) to modify the Neg-criterion. I argue that the Neg-criterion is not a principle of Universal Grammar, but a morphosyntactic feature checking dependency which is parametrised. The different syntactic dependencies holding at each stage of Jespersen's Cycle are the morphological evidence of this parametric variation. My perspective on parametric variation is strictly Minimalist: changes in the syntactic dependencies which negative words enter into are a result of variation and change in the morphosyntactic features which negative words have in the lexicon. I argued that the change from unsupported *ne* to bipartite *ne...not* negation under Jespersen's Cycle is driven by a change in the morphosyntactic features of *ne* from [pol:neg] to [pol:]. The necessity to value the [pol:] feature results in a dependency with a secondary negator. In effect, *ne* becomes part of the verbal agreement morphology, a negative agreement marker. The redundancy of *ne* at stage two of Jespersen's Cycle leads to its loss at stage three.

This account requires two types of *ne* in early English, differing in morphosyntactic features. I argued that the distribution of redundant *ne* changes in Middle English, providing evidence for change in the syntactic and semantic properties of *ne* which correlate with the introduction of bipartite negation under Jespersen's Cycle. Both bipartite negation and redundant negation show *ne* is licensed within the scope of another negative in Middle English in a way which was not so commonly attested in Old English.

The idea that morphosyntactic inadequacy of *ne* drives Jespersen's Cycle provides a new perspective on Jespersen's Cycle in a model of diachronic change

as grammatical competition. Kroch (1989) argues that grammatical competition holds between structurally incompatible morphosyntactic doublets. This is problematic to the account of Jespersen's Cycle by Frisch (1997), who claims that the loss of *ne* and the rise of *not* are independent. An account of Jespersen's Cycle which is driven by competition between two types of *ne* (which have different morphosyntactic features) preserves the notion that competing forms are structurally incompatible. The competition is between *ne* [pol:neg] and *ne* [pol:]. The next chapter will show how a distinction between two competing forms of *ne* lends itself to a diachronic model of Jespersen's Cycle which surpasses Frisch's (1997) model in its empirical coverage. I will show that the loss of *ne* is in fact the result of two changes and supports the idea that there are two forms of *ne* in competition in early English.

My proposals allow arguments for the functional projection NegP to be viewed from a different perspective. NegP is not universally required as a position within INFL at which the Neg-criterion holds. A Minimalist account of Jespersen's Cycle does not necessarily require feature checking to occur in a distinct functional projection. The existence of NegP is largely a matter of the theoretical position adopted concerning the interaction of syntax and morphology. Evidence from Jespersen's Cycle indicates that at stage two the head *ne* has no interpretable features. This gives NegP the same status as AgrP, a projection which consists entirely of uninterpretable features, and whose sole purpose is to provide a distinct position for feature checking in a spec-head configuration. AgrP has been motivated by the extra subject and object positions it allows. These positions are empirically well motivated in certain languages (Bobaljik and Thrainsson 1998), including early English (Haeberli 2002b). For the sake of consistency with Haeberli's account I will assume that [pol:neg] or [pol:] features project PolP or NegP in early English. However, the status of NegP at stage two of Jespersen's Cycle is a place-holder category like AgrP, rather than the core functional categories of C, T, v whose heads always make a semantic contribution to the clause at LF. At stage one of Jespersen's Cycle when *ne* has [pol:neg] features, it is not clear that a negative head need be projected at all. The [pol:neg] feature could equally be present on v or T.

Finally, I address the relationship between negative initial clauses and Jespersen's Cycle. I discussed the empirical facts at length in chapter 3. Here I showed that feature based analyses of both NegV1 and Jespersen's Cycle are possible, and used the interaction between the two phenomena to inform the analy-

sis. Crucially, my account relies on a phase-based spell-out model, as proposed in recent work by Chomsky (1999). This model allows *ne* to inherit [pol:neg] features during the course of the derivation which allow it to move to C^0 [pol:] at stage two of Jespersen's Cycle in just the same way as at stage one of the cycle when *ne* has [pol:neg] features in its lexical entry. Under a phase based spell-out model, the introduction of a secondary negator cannot derive the loss of NegV1. The loss of NegV1 is accounted for independently of Jespersen's Cycle by loss of another uninterpretable feature on *ne* which activates *ne* for movement to C^0 . This uninterpretable feature activates *ne* for movement to C^0 . Its loss will prevent Agreement and Movement, which both require the goal to be active. One objection to this model might be that it posits a second feature on *ne* which is poorly evidenced. However Agree and Move in Chomsky's system require the goal to have at least two features, one interpretable and one uninterpretable. The conclusion that *ne* has at least two different morphosyntactic features is forced on us by the syntactic model which requires two features for an Agreement dependency to hold. Hence it seems sensible to exploit this duality of features to derive two independent changes: the loss of NegV1 and Jespersen's Cycle.

The next chapter will propose a diachronic model of Jespersen's Cycle along the syntactic basis I have outlined in this chapter. Quantitative data will demonstrate the advantages for a grammatical competition model of assuming that there are two morphosyntactically distinct forms of *ne* at successive stages of Jespersen's Cycle. I will compare my model with Frisch (1997), and argue that an account which can distinguish two types of *ne* provides a better fit to the quantitative data and models change more effectively.

Chapter 5

A diachronic model of Jespersen's Cycle

5.1 Introduction

The preceding chapter addressed the structural and formal analysis of the negative dependencies involved in Jespersen's Cycle. I developed an account in which the co-occurrence of *ne...na* and *ne...not* at stage two of Jespersen's Cycle represents the innovation of a syntactic dependency at this stage which was not present at earlier stages. I propose that the dependency is a feature checking relationship which results from the underspecification of *ne* for negation at LF. I propose two types of *ne* with different feature specifications, *ne* [pol:neg] which is an independent semantically interpretable expression of negation, and *ne* [pol:] which is not an independent semantically interpretable expression of negation. Valuation of the [pol:] feature on the latter type of *ne* is responsible for the dependency which leads to co-occurrence of *ne...not*. The emergence of a new redundant use of *ne* at stage two of Jespersen's Cycle supports the view that there are two different types of *ne* at successive stages of the cycle.

An account based on feature specifications allows a distinction to be made between the two types of *ne* involved in Jespersen's Cycle. In this chapter, I will present quantitative evidence for distinguishing the two forms of *ne* involved in Jespersen's Cycle. Distinguishing two types of *ne* provides a more articulated view of Jespersen's Cycle, avoiding some problems of Frisch's (1997) account which I discuss in section 5.3. Distinguishing two types of *ne* means that the loss of *ne* is two changes rather than a single change. This chapter shows that

the two changes have different properties. An account of *ne* as a single change (Frisch 1997) cannot accommodate these differences, whereas they naturally fall out of the feature based model I proposed in chapter 4.

The main aim of this chapter is to show how the structural analysis of Jespersen's Cycle I proposed in chapter four lends itself to an account of Jespersen's Cycle as grammatical competition. The change from stage one to stage two of Jespersen's Cycle is competition between lexical items with mutually exclusive syntactic feature specifications. Stages one and two constitute different syntactic systems (the difference between *ne* [pol: neg] and *ne* [pol:] in my account). These two systems are not exclusive to different periods of time; they co-occur in Middle English, but they are not in stable variation. Rather the frequency of use of the two systems changes over time, through grammatical competition between the two options which are structurally incompatible competitors.

An account which distinguishes *ne* and *ne...not* as syntactically independent systems has empirical advantages. A detailed description of the use of the two options across contexts and across time becomes possible because of the new way I subdivide the diachronic data in this model. Frisch overlooks certain facets of the distribution of *ne* and *not*. In section 5.3.3, I show that his model cannot accommodate the distribution of *ne* and *not* once contextual conditioning on the competing forms is taken into account. The model I propose will take account of some aspects of the change in sentential negators which Frisch overlooks, and avoid some of the problems of his analysis. Quantitative data showing the distribution of competing forms across time and across contexts supports the model in which there are two forms of *ne* rather than just one. These data support the idea that bipartite *ne...not* represents the innovation of a syntactic dependency by morphosyntactic competition. The structure of the chapter is as follows. First, I outline my assumptions concerning morphosyntactic change and its representation in a Minimalist framework. Then, I discuss Frisch's account in detail. Finally, I show that structuring Jespersen's Cycle in the terms I have outlined above and in chapter four provides a more coherent quantitative model of the changes involved.

5.2 Assumptions concerning morphosyntactic change

5.2.1 The logistic model (Kroch 1989)

This section will outline the formal model of morphosyntactic change I will adopt. It must be remembered that the model is a simplification and idealisation of the actual language change situation. However, I believe the results obtained using this model justify its use, as I will show in the course of this chapter.

My approach to morphosyntactic change follows Kroch (1989; 1994). Kroch adopts an approach to change in which each language learner constructs his or her own new grammar on the basis of Primary Linguistic Data in the input, in accordance with certain innate linguistic principles (see for example Lightfoot (1979; 1999)). This allows the capacity for potentially catastrophic language restructuring in each individual language learner. Each individual sets his or her parameters on the basis of the Primary Linguistic Data available to him or her. Hence, each new generation of speakers resets their parameters. I will refer to this approach as the 'parameter resetting approach'. Such restructuring will manifest itself as change if it is sufficiently shared by members of a speech community.

Kroch (1989) extends the parameter resetting approach by arguing that individuals may use two contradictory parameter settings if the linguistic data warrant it. These speakers have two grammars: each grammar having a different and mutually exclusive parameter setting. The choice of which grammar is used in a given context is therefore a matter of language use (similar to code-switching or diglossia amongst bilingual speakers). Parametric options vary not only across populations of language users, but also within the individual, who reacts to parametric variation in the speech community by establishing two or more grammars, each of which instantiates one of the parametric options. The individual's linguistic competence includes information about use of the two grammars.

Kroch demonstrates that morphosyntactic changes proceed in a uniform way, which can be mathematically modelled. This provides a way of describing and comparing changes, of identifying the contexts in which a change operates and those in which it does not, and a means of grouping surface syntactic effects together as reflexes of a single process of change within the grammar. Kroch demonstrates that variation between two variants of a variable undergoing change follows an S-shaped curve. When the frequency of the innovative or advancing form is plotted as a function of time, an S-shaped curve results. The logistic function provides a good fit to this curve. Kroch (1989) observes that linguistic

variants compete in the same way as biological variants in the process of evolutionary competition. Fitting a mathematical function to the S-curve associated with a linguistic change allows two parameters of the change to be estimated. The resulting S-curve has a slope parameter, which equates to the rate of change (in logits per century). The curve also has an intercept parameter: the point at which the line intersects the y axis, which signifies the beginning of the change. The intercept parameter gives the frequency of the innovative form at the start point of the change.

The model allows the two parameters of a change to be considered separately. Kroch claims that a morphosyntactic change proceeds at the same rate in all its contexts, where context refers to any salient factor affecting the frequency of the innovative form, such as the main-subordinate clause distinction for example. In all these contexts, the slope parameter of the S-curves is the same. The contextual differences arise, not through different rates of change, or even different start times for the change (as had been proposed by Bailey (1973)). The contextual effects are differences in the intercept parameter which are maintained as constants throughout the time course of the change, from its inception to its completion. Another way of thinking of this is that although the frequencies of an innovative or advancing form may be different in different contexts, the relationship between the frequency of the advancing grammatical option in all its contexts will remain the same over time. The intercept parameter reflects these contextual differences which mark the relationship between the contexts at the change's actuation. The differences between the contexts seen at the change's actuation remain the same throughout the entire course of the change.

... in statistical terms, the constant rate hypothesis is the claim that the overall rate of use of a form is independent of the contextual effects on its use. (Kroch 1989, 205)

The important point for my purposes is that contexts of a single change can be identified by the same rate of change (slope parameter), and distinguished from unrelated independent changes which will have a different rate of change (slope parameter).¹ Given the small amounts of data I am dealing with throughout, and

¹The possibility remains that the same slope could characterise two independent changes by coincidence. The two changes need to be plausibly related as effects of the same parameter. This relies on a plausible syntactic account of change. The Constant Rate Effect only provides empirical support for the syntactic analysis, it does not determine what that analysis should be.

the difficulty of assigning precise dates to most of my sources, I do not perform logistic regression on my data. Instead, I compare and contrast changes according to the different effects which contextual factors, such as clause type, have on each change. The data are split into four Middle English time periods (1150-1250, 1250-1350, 1350-1420, 1420-1500).

Kroch models the process of morphosyntactic change within a Principles and Parameters syntactic framework. Each competing set of variants are identified on the following grounds. First, competing forms must bear a plausible syntactic relation to each other, hence, for instance, changes under Jespersen's Cycle will not be directly related to a change in another area of the grammar, for instance changes in case marking or binding. The competing forms must be plausibly related by a syntactic parameter. Second, competing forms must be mutually exclusive forms at the formal syntactic level, otherwise there is no process of competition. Kroch (1989) addresses morphosyntactic change in terms of abstract parameter settings. The notion of abstract parameter has changed in recent Minimalist frameworks. As I am using such a framework, I will now discuss the way in which Minimalism accommodates change.

5.2.2 Variation, change and Minimalist syntax

Minimalism (Chomsky 1995; 2000) does not make any reference to abstract ideas of syntactic parameter, only to features and their effects at the LF and PF interfaces. There are no syntactic levels other than the interfaces, and no syntactic formatives other than morphosyntactic features. Hence, it would seem that variation must be reducible to some consequence of the morphosyntactic features. Minimalism is problematic for variation in general as it does not permit syntactic operations to apply optionally. Each syntactic operation must be motivated by features, within the constraints of the derivational system. The derivational system makes reference only to processes of (re-)Merge or Agree. The computational system is invariant, performing operations according to the input it receives in terms of morphosyntactic features from the lexicon. Hence, the lexicon is a natural place to accommodate variation in this theory. Both aspects of variation in languages, lexical and morphosyntactic variation, are the result of how the language learner constructs his or her lexicon during the process of language acquisition. Parametric variation is then reduced to lexical variation.

This has the consequence that the range of morphosyntactic variation is equal

to the number of morphosyntactic features and their values. It renders unnecessary the concept of diglossia and multiple grammars. Grammar competition does not require multiple grammars, just multiple and mutually exclusive lexical entries associated with some item in the lexicon (see Kroch (1994)). Roberts and Roussou (2003) propose to limit morphosyntactic variation to functional items in the lexicon. However, this distinction may be an artificial one as far as the language learner is concerned. The language learner will posit variation and competition, wherever there is evidence for it in the Primary Linguistic Data. In principle only the number of morphosyntactic features in the lexicon restricts the number of parametric options and values available. The difference between variation and change represents stability and instability of variation across time. The factors which make some variation unstable across time are as yet unclear.

This 'grammatical competition' view of change is somewhat idealised. It says little about the innovation and beginnings of changes, or about the motivation for change in the first instance. It can only describe the diffusion of a change across time, but by providing evidence for the structure of parametric competition over time, it indicates the way parametric options are structured within this competition in a way which synchronic studies of parametric variation do not. However, the processes of reanalysis which are necessary in order to initiate changes raise separate issues concerning the innovation of parametric options and the actuation of change. The parameter resetting approach allows each individual language learner to establish his own inventory of parametric options. However, Minimalism does offer a sort of evaluation mechanism to distinguish more and less economical grammars. It may be that the language learner is innately conservative (Roberts and Roussou 2003) preferring simpler derivations to more complex ones. This provides some rationale for adaptive change to reduce grammatical complexity. Within Minimalism, the most economical derivation would involve no collocation or syntactic operations at all. Such a derivation would proceed directly from the lexicon to the interfaces, without any need for syntactic feature checking operations. The more syntactic feature checking operations required in the derivation, the less economical the derivation. Hence synthetic or inflected languages are more economical than analytic languages which make use of more Merge/Agree operations. The existence of less economical languages must be due to other types of pressure which act to preserve less economical derivations. The notion of economy is only one of the motivations for change, which after all arises from patterns of language use in the speech community

(Kroch 1989). Patterns in the input or trigger experience are crucial within the parameter resetting approach. The Primary Linguistic Data in the input do not always direct the language learner to the optimal (most economical) derivation in the Minimalist syntactic sense.

5.2.3 Problems for the grammatical competition approach: Jespersen's Cycle

Frisch (1997) proposes to model Jespersen's cycle within the grammatical competition framework, using the logistic model (Kroch 1989). However, Jespersen's Cycle is not obviously amenable to analysis as grammatical competition. There is no direct morphosyntactic replacement of *ne* by the innovative form *not*. Instead, there is a period in which *ne* and *not* co-occur increasingly frequently, before *ne* is lost.

Period	ne	%	ne...not	%	not	%	Total
1150-1250	832	54.6%	686	45.0%	5	0.3%	1523
1250-1350	209	25.0%	541	64.7%	86	10.3%	836
1350-1420	125	5.0%	278	11.2%	2086	83.8%	2489
1420-1500	36	1.7%	24	1.2%	2000	97.1%	2060

Table 5.1: The distribution of the three forms *ne*, *ne...not*, *not* in the PPCME2 data. All clause types.

The existence of three stages in the Middle English Jespersen's Cycle indicates that there are two processes of change at this period, which overlap in time. The issue is how to characterise these two processes of change as grammar competition, understood in the Minimalist sense of competition between lexical items with contradictory morphosyntactic features. The analysis proposed by Frisch (1997) involves two processes of competition, between overt or null realisations of *spec,NegP* and *Neg⁰*, which he claims are independent. The analysis I proposed in chapter 4 differs from Frisch's. I propose that the first change creates a dependency between *ne* and *not*, whilst the second change eliminates *ne* in those contexts where it is redundant. The differences are schematized below:

(220) Frisch's model:

- a. *Neg⁰*: *ne* > null
- b. *spec,NegP*: null > *not*

(221) Feature based model:

- a. [pol:neg] > [pol:]: ne > ne...not
- b. Loss of *ne*: ne...not > not

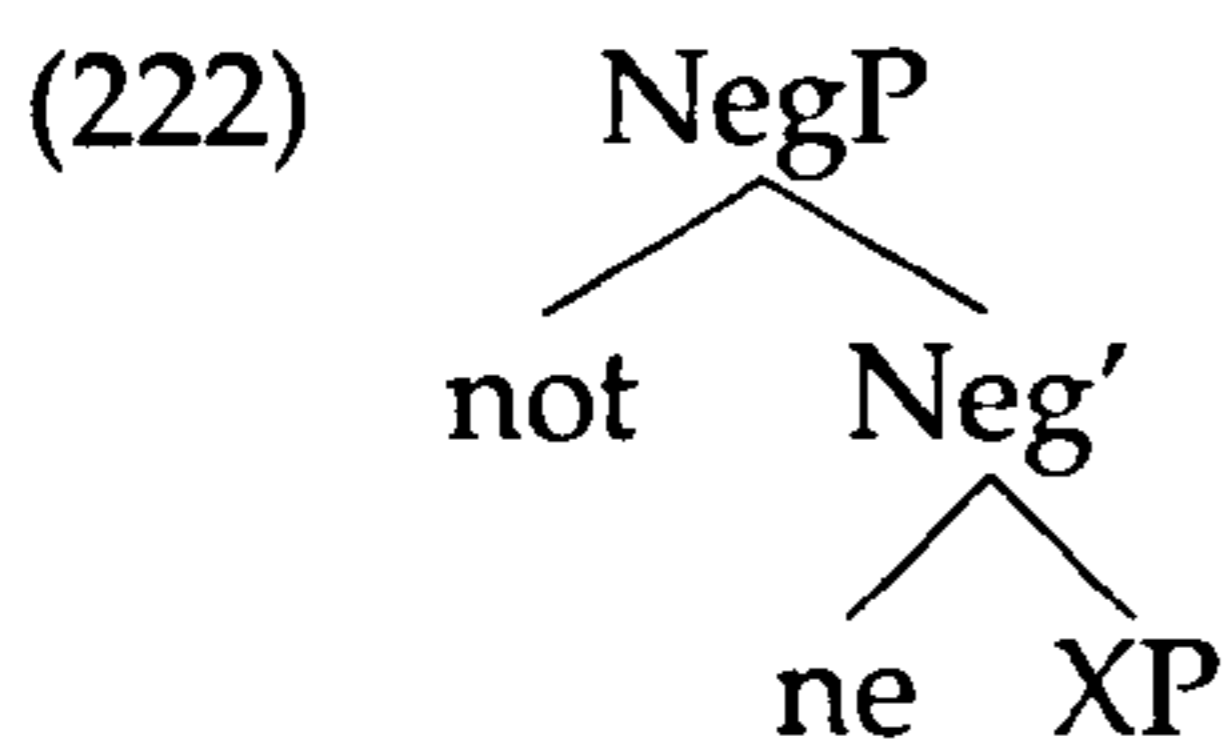
Quantitative data support my model better than they support Frisch's model, as shown below. The analysis of morphosyntactic change informs the syntactic representation of negation in the Middle English period. The way the changes interact with each other over time is crucial to an analysis of Jespersen's Cycle which provides a coherent view of the quantitative data. I will argue that the effects of parametric change are syntactic, not simply changes in the morphological realisations of underlyingly present NegP positions. This view is more consistent with Minimalist notions of economy and subdivides the stages of Jespersen's Cycle in a way which is supported by the quantitative analysis.

5.3 Accounts of Jespersen's Cycle: Frisch (1997)

5.3.1 Frisch's account: the redundant licensing model

Frisch (1997) undertakes a quantitative analysis of the changes to sentential negation in Middle English within a grammar competition framework. He uses the logistic model to argue that the loss of *ne* and the rise of *not* are independent changes, proceeding at different rates. These two changes are structurally unrelated: the change involving *ne* is centred on the head of NegP, the change involving *not* on its specifier position. The structural relation between specifier and head is constant throughout Middle English, even when head and specifier positions are not realised by overt morphemes. The two changes involve the morphological realisation of these positions. There are two processes of competition between overt and null morphemes, one in specifier position, and one in head position. There is no direct competition between *ne* and *not* as these are different ways to identify NegP using overt morphology.

The *ne...not* forms arise from the interaction between the competition in specifier and head positions. Frisch (1997) claims that NegP must be licensed by overt morphology (Economy of Projection) in either specifier or head position. He claims that NegP is redundantly licensed by *ne...not* as both head (*ne*) and specifier (*not*) positions are morphologically realised.



Frisch takes this approach to its logical conclusion, arguing that bipartite *ne...not* negation is not an independent system. It is an historical accident that both positions just happen to be realised by overt morphemes in the Early Middle English period, with no syntactic consequences. Bipartite *ne...not* is an epiphenomenon resulting from the different rates and time courses of the decline in use of *ne* and the increase in use of *not*. Simply, the rise of *not* happens earlier than the loss of *ne*, hence the two changes overlap, and there is a period in which the two forms co-occur. This is an attractive and simple view of the change at the descriptive level. However, it relies on the assumption that the head *ne* and the specifier *not* are syntactically independent. That is, that the syntactic configuration involved in sentential negation is an invariant Neg-criterion configuration (Haegeman 1995), and only the morphological realisations of underlying positions changes (contrary to the account I proposed in chapter 4).

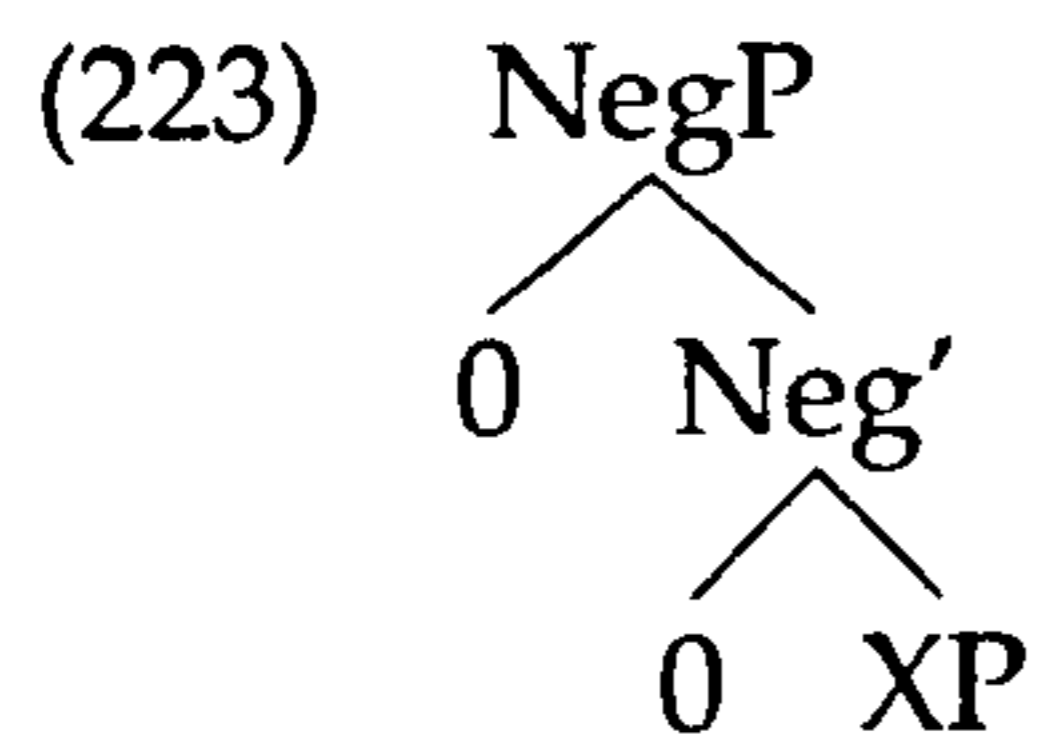
5.3.2 Theoretical issues

Frisch's account relies on an X'-theoretic approach to NegP, and the Neg-criterion (Haegeman 1995) underlies much of his analysis. Thus, Frisch's NegP always has two parts, a specifier and a head, either of which can be overtly morphologically realised. It also relies on the existence of a null negative operator, which I argued in chapter 4 was unnecessary (following Rowlett (1998)).

The bipartite *ne...not* pattern arises when both specifier and head positions of NegP are morphologically realised. The changes under Jespersen's Cycle are changes in the way NegP is morphologically identified and licensed by the existence of negative morphology. Underlyingly, NegP consists of an operator in its specifier position and a head element, as proposed by Haegeman (1995). In chapter 4, I discussed Rowlett's (1998) objections to the Neg-criterion, and proposed an alternative analysis in which the structures associated with *ne* and *ne...not* are different. This approach has the advantage that it links overt morphology to syntactic structure in a more direct way. In this chapter, I discuss some theoretical and empirical problems which Frisch's account faces, and show how the Minimalist alternative I proposed in chapter 4 fares in dealing with the diachronic

data.

Frisch adopts the view that there are licensing conditions associated with NegP. These can be summarised as follows. Economy of projection means that in order for negation to be identified, and NegP to be projected one of the positions in NegP must be given overt morphological realisation. This rules out configurations like (223) being used to convey negation.



However, Frisch's account does not consider the full implications of this condition on NegP for the quantitative account. In effect, it counters Frisch's claim that changes to the realisations of spec,NegP and Neg⁰ are independent. In practice, the licensing condition constrains the changes possible under Jespersen's Cycle so that *ne* can only be absent if *not* is present. In describing the progress of Jespersen's Cycle, Frisch (1997) implies that the changes are structured in this way.

Thus we see a pattern where the original negator *ne* is used while a new negator *not* (in the specifier of NegP) becomes established. Once *not* is well established, but not before, the use of *ne* declines... In the change in negation in Middle English, the emergence of a new structural option for *not* is the precursor to syntactic variation and change in the use of *ne*. (Frisch 1997, 47)

However, his quantitative model of the changes does not take account of the relationship between the changes. His model maintains the independence of the loss of *ne* and the spread of *not* in a way which does not fully take account of the licensing requirements on NegP.

The relationship between changes affecting *ne* and *not* is not one of independence, but of the introduction of *not* feeding the loss of *ne* by creating the context in which loss of *ne* can occur without violating the morphological licensing conditions on NegP (225). Frisch's account can be schematised as (224). The alternative I outline here is schematised as (225).

- (224) a. Spec,NegP: 0 > not (introduction of *not*)
 b. Neg⁰: *ne* > 0 (loss of *ne*)

- (225) a. $ne > ne...not$ (introduction of *not*)
 b. $ne...not > not$ (loss of *ne*)

In (224), *ne...not* is epiphenomenal, an accident of the way the two changes pattern over time. The conjunction of the two changes in Middle English produces *ne...not* forms. In (225), *ne...not* is a distinct stage in its own right. It is relevant to the progress of Jespersen's Cycle as it creates the conditions for the loss of *ne* to operate. I show that modelling data from the PPCME2 using (225), that is, with *ne...not* as a distinct stage relevant to the progress of the cycle, produces a more coherent view of the quantitative data than Frisch's model (224). The relationship between the changes in (225) requires two different types of *ne* to be distinguished. (225) claims that *ne* can only be lost in the context of *not*. Forms of *ne* which co-occur with *not* must be differentiated from those which do not. Only the former type can lose its PF realisation. The syntactic distinction I make between two forms of *ne* in chapter 4 lends itself to the account of Jespersen's Cycle I propose here, as it allows two different types of *ne* to be distinguished.

5.3.3 Empirical issues and problems

The independence of *ne* and *not* proposed by Frisch makes a strong prediction concerning the frequency of *ne...not*. Given Frisch's proposal that *ne* is subject to one change and *not* to a separate change, the changing frequency of *ne...not* should result from the intersection of the changing overall distributions of *ne* and *not* as they compete with null elements for head and specifier positions of NegP respectively. Therefore, the frequency of *ne...not* is predicted to be equal to the product of the frequencies of *ne* in Neg⁰ and *not* in spec,NegP (226).

$$(226) \quad P(ne...not \text{ is used}) = P(ne \text{ is used}) \times P(not \text{ is used in spec,NegP})$$

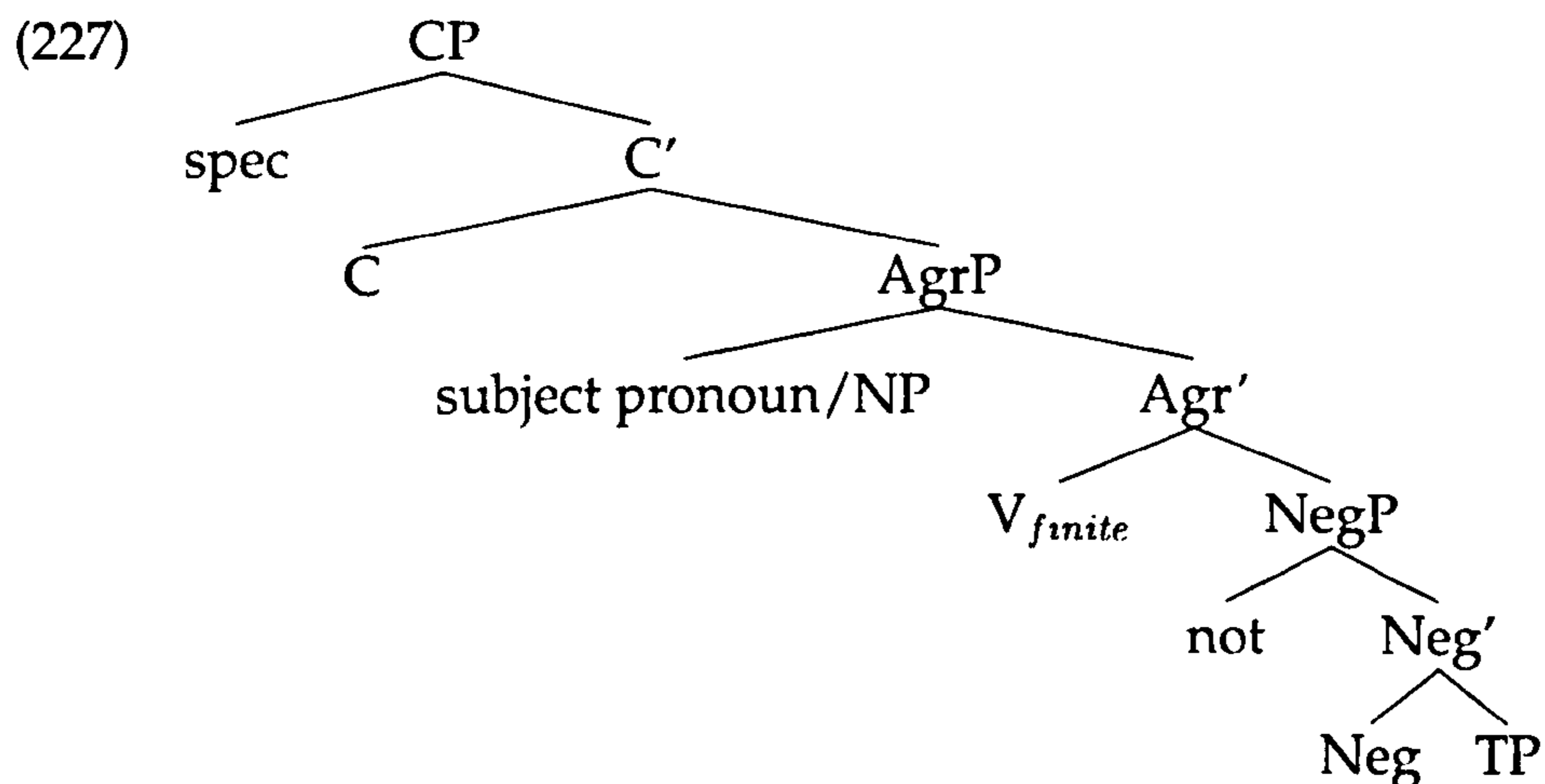
(Frisch 1997, 51)

Importantly, for this equation, Frisch (1997) does not count all instances of *not* as spec,NegP *not*. There are two alternative analyses of *not* which compete with spec,NegP *not* during Middle English: the adverbial adjunct *not* and the head *not* (Neg⁰).

In the earlier Middle English periods, he claims that a large proportion of *not* are adverbial adjuncts rather than specifiers of NegP. I do not accept Frisch's assertion that all *not* in Early Middle English are adverb *not* rather than the sentential negator *not*. In chapter two, I rejected the basis on which Frisch calculates the

frequency of adverb *not*. He claims that all *not* preceding the finite verb must be adjoined to positions higher than NegP. I showed that there are no clear empirical grounds to distinguish adverb *not* from sentential negator *not* in a Middle English syntax which has variation in the headedness of INFL and stylistic fronting to derive pre-verbal *not* (see section 2.4.2). There is no evidence for change in the status of *not* from adverbial adjunct to sentential negator in Middle English. It follows that the increased use of *not* in the Middle English period is not due to any discernible change in the properties of *not* at this period. Rather, syntactic licensing conditions on *ne* change to entail the more frequent use of *not* in Middle English.

Frisch (1997) claims that the loss of *ne* (Neg⁰) leads to an alternative analysis of *not* as the negative head. He argues that in clauses without *ne*, a substantial proportion (17%) of Late Middle English *not* are the head Neg⁰ rather than spec,NegP, in the periods from 1350 onwards. Frisch bases this argument on the frequency of *not* preceding a subject in clauses showing subject verb inversion. Both NP and pronoun subjects are included in Frisch's calculations. He locates both subject pronouns and subject NPs in spec,AgrP (227).²



(Frisch, 1997, ex.7, 26)

Therefore, any instances of *not* preceding subjects are higher than spec,AgrP. Frisch claims that the only position available for *not* in these contexts is C⁰, and that these *not* are clitics on the finite verb, in other words, heads. His estimate of head *not* is based on the frequency of *not* preceding a subject in all cases of subject verb inversion.

²The analysis of OE and ME involving two subject positions (Haeberli 2002b) had not been proposed at the time when Frisch (1997) conducted his analysis of negation. However, we will see that Haeberli's analysis has important implications for Frisch's model.

However, the structural assumptions I make in chapter two are not consistent with Frisch's method for estimating head *not*. I make a distinction between the positions of subject pronouns and subject NPs: subject pronouns occupy spec,AgrP, but subject NPs typically occupy a range of lower positions (either in spec,TP or as late subjects which are in VP or extraposed). Late subjects will follow *not* even when *not* is the specifier of a low NegP. The position of *not* relative to these subjects does not disambiguate head *not* from spec,NegP *not*. Only inversion of V+*not* with a subject pronoun provides unambiguous evidence for *not* as a head in C⁰, clitic on the finite verb which undergoes V to C movement. Pronominal subjects do not remain in VP or extrapose. These contexts are few in Middle English, comprising mostly imperative and interrogative clauses. Rissanen (1999) discusses the position of *not* in Middle English negative interrogatives. He shows that the frequency of *not* preceding a subject pronoun is lower than the frequency of *not* preceding a subject NP (Table 5.2 based on Rissanen (1999, Table 3)).

Order	Personal prn subject	NP or demonstrative prn subject
V + subject + not	104 (95%)	2 (10%)
V + not + subject	5 (5%)	18 (90%)
Total	109 (100%)	20 (100%)

Table 5.2: Late Middle English (1350-1500) occurrences of post-verbal subject and *not* in the Helsinki Corpus (subperiods ME3-ME4). Data from Rissanen (1999, Table 3).

This difference between pronouns and NPs throws Frisch's estimate of the frequency of head *not* into question, as clauses with 'V+not - subject pronoun' which are unambiguous evidence for *not* as a head must be isolated from those with 'V+not - subject NP' which are not. Clauses with inversion of finite verb and subject pronoun are structurally unambiguous. In Late Middle English (1350-1500), Rissanen (1999) notes 109 relevant clauses in the Helsinki Corpus, only 5 of which have *not* preceding the subject pronoun (228).

- (228) a. Xal not I don so?
 Shall not I do so?
 'Shan't I do so?'

(Chaucer, *Melibee* 221, C1 (Rissanen 1999, ex.15))

- b. Am not I lord and kyng of the cuntre?
 Am not I lord and king of the country?

'Aren't I king and lord of the country?'

(Digby 100 (Rissanen 1999, ex.16))

- c. wyl not ye stande by me as a frende ought do to another?
will not you stand by me as a friend ought do to another?

'Won't you stand by me as one friend ought do to another?'

(Caxton, *Reynard* [REYNARD],56 (Rissanen 1999, ex.17))

On this basis, I estimate the frequency of head *not* to be around 5%, much lower than Frisch's estimate (of 17%). Once the lower estimate of head *not* is applied to the PPCME2 data, the redundant licensing model, repeated here as (229), fails to provide a good fit for the Late Middle English (1350-1500) periods.³

(229) Frequency of *ne...not* = Frequency of *ne* in Neg⁰ X Frequency of *not* in spec,NegP

Instances of *ne...not* are counted twice in this model (Table 5.3) as they involve both *ne* and *not*. Hence the total number of negative clauses in the model does not equal the sum of the *ne* and *not* columns, nor does the combined frequency of the total *ne* and total *not* equal 100%. The frequency is of the number of clauses involving *ne* or *not*. Clauses with *ne...not* are counted twice as they involve both forms. In Table 5.3, the totals column is the total number of negative clauses for each period.

Table 5.3 includes all clause types. Instances of *ne* in negative doubling with negative adverbs or negative NPs are excluded as in Frisch's original model. Inputs to the model include *ne*, *ne...not* and *not*, where *not* is in spec,NegP. The frequency of *ne...not* is calculated by the formula in (229). The frequency of *ne...not* calculated based on my PPCME2 data using the formula in (229) provides a progressively worse estimate for the frequency of *not* throughout the Middle English period. I give some indication of this by showing how closely the estimated and actual frequencies of *ne...not* correspond in the final column of Table 5.3. I demonstrate this through the formula *estimated ne...not/observed ne...not*. The closer the resulting figure is to 1.00, the closer the fit of the estimate to the observed frequency. Figures higher than 1.00 show that the model overestimates the frequency of *ne...not* and give an indication of the magnitude of the overestimate.

³It is worth noting here that even if Frisch's (1997) estimate of 17% Neg⁰ *not* is accepted, his redundant licensing model still fails to provide an adequate fit to the PPCME2 data.

Period	ne	not	Total neg cl	Estimated <i>ne...not</i>	Observed <i>ne...not</i>	Estimated/ Observed
1150-1250	1518 (99.7%)	691 (45%)	1523	689 (45%)	686 (45%)	1.00
1250-1350	750 (90%)	627 (75%)	836	563 (67%)	541 (65%)	1.04
1350-1420	403 (16%)	2246 (90%)	2489	364 (15%)	278 (11%)	1.31
1420-1500	60 (3%)	1919 (93%)	2056	56 (3%)	24 (1%)	2.33

Table 5.3: The model of *ne...not* as redundant licensing compared with the observed frequency of *ne...not*, following Frisch (1997, 51ff). Matrix and subordinate clauses from the PPCME2. Excluding head *not* at a rate of 5% of the total *not* in periods following 1350.

Table 5.3 shows that the fit of Frisch's redundant licensing model is not good for my PPCME2 data. In fact the examples of estimated and observed *ne...not* constitute significantly different proportions of the total negative clauses for the periods 1350-1420 and 1420-1500. χ^2 -tests illustrate the poor fit of the redundant licensing model for the Late Middle English PPCME2 data. Table 5.4 shows the χ^2 -test performed for 1350-1420, Table 5.5 shows the χ^2 -test performed for 1420-1500. These take as their inputs the estimated and observed figures for *not* and the frequency of other forms of sentential negation (involving single negators). The resulting χ^2 and p values are shown in the final two columns. All these χ^2 -tests involve one degree of freedom. Only the χ^2 -tests for Late Middle English are shown here. Similar tests for the period 1150-1350 do not report significance.

Observed single negators (ne, not) = 2211	Estimated <i>ne...not</i> = 364	Chi ² =10.06
Observed single negators (ne, not) = 2211	Observed <i>ne...not</i> = 278	p≤0.01

Table 5.4: The chi-square test to test the significance of differences between estimated and observed *ne...not* for the period 1350-1420.

Observed single negators (ne, not) = 2032	Estimated <i>ne...not</i> = 56	Chi ² =12.55
Observed single negators (ne, not) = 2032	Observed <i>ne...not</i> = 24	p≤0.001

Table 5.5: The chi-square test to test the significance of differences between estimated and observed *ne...not* for the period 1420-1500.

In the PPCME2, which is a much larger corpus than the first edition of the PPCME used by Frisch, the redundant licensing model does not provide an adequate fit for the LME data. Using a revised estimate of head *not* which is more consistent with my structural assumptions impacts on the success of Frisch's model. Once only 5% of Late Middle English *not* are excluded as heads, Frisch's

model overestimates the frequency of *ne...not* in the period 1350–1500 by a significant margin.

I will now show why the redundant licensing model fails for the PPCME2 data. Frisch's account makes very concrete predictions about the distribution of *ne...not* in all contexts. For each context, the frequency of *ne...not* should be equal to the intersection of the overall frequencies of *ne* and *not*. A problem with Frisch's account of the change from *ne* to *not* is that he considers Jespersen's Cycle to be a unitary change, operating in the same way across all clause types. Frisch's database is described as 'declarative clauses' (Frisch 1997, 31), which I take to include main, conjoined and subordinate clauses. Frisch does not offer a more precise description of the clauses included in his database or detailed examination of Jespersen's Cycle in particular subsets of clauses or other relevant contexts. Therefore, the next section of the discussion will concentrate on the application of Frisch's model to two groups of clauses: main clauses and subordinate clauses.

If the frequency of *ne...not* in main clauses (including non-conjoined, first and second conjunct main clauses) and subordinate clauses is modelled separately for each context using the redundant licensing model, differences emerge between the fit of the model to the two datasets. These are unexpected. The redundant licensing model makes a very strong and simple claim: that the frequency of *ne...not* in each context should follow directly from the overall frequencies of *ne* and *not* without further stipulations or mechanisms being invoked.

However, the redundant licensing model provides a worse fit for subordinate clauses (Table 5.6) than for main clauses (Table 5.7), particularly in Late Middle English. I give an indication of the fit of the redundant licensing model, as before, by dividing the estimated *ne...not* figure by the actual figure for *ne...not* (estimated *ne...not*/actual *ne...not*). The closer this figure is to 1.00 the better the correspondence between estimated and observed figures, and the better the fit of the model. Figures higher than 1.00 show that the frequency of *ne...not* is overestimated, and gives an indication of the magnitude of the overestimate of *ne...not* within the redundant licensing model. Again, I assume that only 5% of the total *not* in the period 1350-1500 are heads. These are excluded from Tables 5.6 and 5.7.

The estimated and observed frequencies of *ne...not* do not contribute significantly different proportions of the negative clauses at any period in main clauses. Table 5.8 shows the form of the χ^2 -tests conducted to establish this conclusion.

For subordinate clauses, χ^2 -tests show that the estimated incidence of *ne...not* comprises a significantly different proportion of the total negative clauses, in

Period	ne	not	Total neg cl	Estimated <i>ne...not</i>	Observed <i>ne...not</i>	Observed / Estimated
1150-1250	980 (100%)	334 (34%)	982	333 (34%)	332 (34%)	1.00
1250-1350	332 (94%)	203 (57%)	355	190 (53%)	180 (51%)	1.05
1350-1420	245 (19%)	1166 (88%)	1320	216 (16%)	152 (12%)	1.42
1420-1500	43 (4%)	963 (92%)	1046	40 (4%)	11 (1%)	3.60

Table 5.6: The model of redundant licensing, following Frisch (1997). All Subordinate clauses.

Period	ne	not	Total neg cl	Estimated <i>ne...not</i>	Observed <i>ne...not</i>	Observed / Estimated
1150-1250	538 (99%)	357 (66%)	541	355 (66%)	354 (65%)	1.00
1250-1350	418 (87%)	424 (88%)	481	368 (77%)	361 (75%)	1.02
1350-1420	158 (14%)	1080 (92%)	1169	146 (12%)	126 (11%)	1.16
1420-1500	17 (2%)	956 (95%)	1010	16 (2%)	13 (1%)	1.24

Table 5.7: The model of redundant licensing, following Frisch (1997). All main clauses.

Observed single negators (ne, not)	Estimated <i>ne...not</i>
Observed single negators (ne, not)	Observed <i>ne...not</i>

Table 5.8: The data input to a chi-square test to test the significance of differences between estimated and observed *ne...not* and the fit of Frisch's model.

comparison to the observed incidence of *ne...not* for the periods 1350-1420 and 1420-1500. The figures input to χ^2 -tests for each period, and the resulting χ and p values are shown in Table 5.9. All these χ^2 -tests are based on one degree of freedom.

1350-1420		
Observed single negators (<i>ne</i> , <i>not</i>) = 1168	Estimated <i>ne...not</i> = 216	Chi ² =9.62 p≤0.01
Observed single negators (<i>ne</i> , <i>not</i>) = 1168	Observed <i>ne...not</i> = 152	
1420-1500		
Observed single negators (<i>ne</i> , <i>not</i>) = 1035	Estimated <i>ne...not</i> = 40	Chi ² =16.1 p≤0.001
Observed single negators (<i>ne</i> , <i>not</i>) = 1035	Observed <i>ne...not</i> = 11	

Table 5.9: Chi-square tests for the significance of differences between estimated and observed *ne...not* and the fit of Frisch's model in subordinate clauses

These differences in fit between clause types fall outside Frisch's model, as does the fact that in both clause types, the fit of the model progressively worsens during Middle English. The model of redundant licensing proposed by Frisch (1997) produces a much better estimate of the frequency of *ne...not* in main clauses than in subordinate clauses, but its failure to account for the overall distribution of *ne...not*, or the difference between the distribution by clause types calls Frisch's account into question.

The redundant licensing model does not hold as predicted. Frisch's account assumes that the relationship which holds between the three forms involved in Jespersen's Cycle (*ne*, *ne...not*, *not*) is the same in all periods and clause types, so the differences between main and subordinate clauses should be attributable to differences in the frequency of *ne* and *not*. These are the only two parameters in Frisch's model. The data I presented here show that the relationship which the redundant licensing model forces between *ne*, *not*, *ne...not* does not allow for the observed difference between main and subordinate clauses. The fit of the redundant licensing model is worse for Late Middle English subordinate clauses than for main clauses, indicating a systematic difference between clause types which is unexplained under Frisch's model.⁴ Furthermore, the redundant licensing model is consistently a worse fit for Late Middle English data than for Early Middle English data, indicating some aspect of change in Late Middle English which eludes Frisch's model. There is some aspect of Jespersen's Cycle which is

⁴The reasons for the differences between main and subordinate clauses are unclear at this point. The underlying reasons for the differences between main and subordinate clauses will await further detailed research.

sensitive to clause type and which is part of a process of change which Frisch's model overlooks. So the relationship between the three forms (*ne*, *ne..not* and *not*) changes during Middle English, and is sensitive to contextual factors such as clause type. Frisch's model does not lend itself to the larger PPCME2 corpus, nor does it accommodate the contextual factors identified in this section.

In section 4.4, I proposed an alternative way to relate the changes involved in Jespersen's Cycle. I will pursue this account here in order to examine the relationship between *ne* and *not* in more detail, to see whether Jespersen's Cycle can be accommodated within a grammar competition model.

5.3.4 An alternative diachronic model of Jespersen's Cycle

In the preceding sections, I have outlined some theoretical and empirical difficulties with and objections to Frisch's (1997) account of Jespersen's Cycle, and suggested an alternative account. I will elaborate this account here, before continuing to examine quantitative evidence from change in the Middle English period to support my claims. I hypothesize that Jespersen's Cycle involves three independent stages, linked by two processes of change (230). First is a change from unsupported *ne* to supported *ne...not*. *ne...not* is a syntactically independent stage, and the context for loss of *ne*. Given that negation must be morphologically identified, *ne* can only be eliminated in contexts where it is redundant as a marker of negation, that is in contexts where *ne* is supported by *not*.

- (230) a. *ne* > *ne...not* (introduction of *not*)
 b. *ne...not* > *not* (loss of *ne*)

My approach to the changes will examine whether there is quantitative justification for this approach to Jespersen's Cycle. I will show that the properties of the two changes are different, such as their sensitivity to contextual factors, which derives the differences seen between main and subordinate clauses.

5.4 Quantitative evidence for a model of Jespersen's Cycle as grammatical competition

This section will show the progress of the two changes I postulate to account for Jespersen's Cycle. The frequency of innovative forms will be plotted over four

time periods in different linguistic contexts. The data comprise the prose texts in the PPCME2 (Kroch and Taylor 2000a). I will not assign specific dates to each text. Some of the Middle English texts are difficult to date precisely. Furthermore, there are insufficient data to achieve a representative spread of data across the whole time continuum, particularly in Early Middle English. There are large gaps in the Middle English period where there are no extant texts. Therefore, I will divide the Middle English data into four periods. These are the periods used in the PPCME2: 1150-1250, 1250-1350, 1350-1420, 1420-1500. These periods differ from those used by Frisch (1997), who assigns texts to five periods of equal length (70 years). Subdividing the Early Middle English into longer periods than the Late Middle English counteracts the fact that there are fewer Early Middle English data and fewer texts in the early periods. Some of the points I made concerning data in chapter 2 are pertinent here, in particular, the fact that there are only three large texts in the period 1250-1350 makes this period unrepresentative. Also, there is dialect discontinuity between texts from the period 1150-1250, which are predominantly localised to the West Midlands, and the later periods 1350-1500 which are predominantly localised to the East Midlands and London. I will be consistent in my subdivision of the corpus into time periods, in order to make all my results comparable. My results must be necessarily more approximate than they would be if each text were assigned a precise date along a time continuum, however, there are insufficient data to make fine distinctions by date. I will show that substantive results can be obtained despite this.

5.4.1 Quantifying the increased use of *not*

I hypothesize that the increased use of *not* is due to a change in the morphosyntactic features of *ne* ([pol:neg]>[pol:]) which is distinct from the later stage of Jespersen's Cycle at which the morpheme *ne* is lost. There are two types of *ne*: *ne* [pol:neg] at stage one, and *ne* [pol:] at stage two.

The secondary negator replaces unsupported *ne*, as *ne* loses its negative value. So, *not* and unsupported *ne* are in complementary distribution, as both have [pol:neg] features and function as negative markers. However, *not* is not in complementary distribution with all instances of *ne*. *not* co-occurs with *ne* at stage two. At this stage, I propose that *ne* has unvalued [pol:] features which must receive a value from *not*. Whilst unsupported *ne* and the secondary negator *not* are not competitors in phrase structure terms, they are mutually exclusive options

in terms of their morphosyntactic features. *not* is brought into competition with unsupported *ne* because of changes in the morphosyntactic features on *ne* (from [pol:neg] to [pol:]).

Therefore the quantitative model measures the frequency of *not* versus unsupported *ne*. These are the two forms with [pol:neg] features, which are mutually exclusive options throughout Jespersen's Cycle. The model takes all instances of *not* as the innovative form, irrespective of whether *ne* co-occurs with *not*. *ne* in the context of *not* is a separate lexical item which is not in complementary distribution with *not*, and as such plays no role in the introduction of *not*. So, the overall frequency of *not* is compared with the overall frequency of unsupported *ne*. The total database comprises clauses with *ne*, *ne...not* and *not*.

I showed that the distribution of *not* is different in main and subordinate clauses. Tables 5.6 and 5.7 illustrate that *not* is less frequent in subordinate clauses than main clauses. There is some evidence that *not* appears less frequently in certain other clause types too. Jack (1978a) notes some contexts in which unsupported *ne* continues to appear in Late Middle English (c.1400). The latest examples of unsupported *ne* in these contexts postdate most of the examples in other main and subordinate clause contexts. Jack gives Late Middle English examples of unsupported *ne* in the following contexts:

1. *That*-clauses within the scope of a negative or interrogative. I define scope in terms of the C-command relation, so that these clauses are clauses C-commanded by a negative or interrogative element.

- (231) For ther nys no creature so good that hym ne wanteth
 For there NEG-is no creature so good that he NEG needs
 somewhat of the perfeccioun of God
 something of the perfection of God
 'For there is no creature so good that he doesn't need something of
 God's perfection'
 (*Melibee* 1080, Jack (1978a, 60))
- (232) For what man is so sad or of so parfait welefulnesse, that he
 For what man is so satisfied or of so perfect happiness, that he
 ne stryveth or pleyneþ ayen the qualite of his estat?
 NEG quarrels or complains about the quality of his circumstances?
 'For who is so satisfied or perfectly happy that he doesn't quarrel or
 complain about his circumstances?'
 (*Boece* II,pr.4,72-5, Jack (1978a, 60))

2. In clauses in which the negation is only formal or redundant: that is, *ne* does not contribute a negative interpretation to the semantics of the clause (see section 4.6 for discussion of redundant negation).

(233) No man douteth that he ne is strong...
 No man doubts that he NEG is strong...
 'No man doubts that he is strong...'
 (*Boece* II,pr.6 93-4, Jack (1978a, 60))

3. In conditional clauses introduced by *if*:

(234) if he ne hadde pitee of mannes soule, a sory song we myghten
 if he NEG had pity on a man's soul, a sorry song we might
 alle synge
 all sing
 'if he didn't take pity on a man's soul, we might all sing a sorry song'
 (*Parson's Tale* 315, Jack (1978a, 61))

Two of Jack's contexts provide sufficient data to be distinguished during the quantitative analysis: conditional *if*-clauses (234), and clauses within the scope of negation (231). These subordinate clause contexts will be distinguished from other subordinate clauses (237). (235) and (236) show that *ne*, *ne...not*, *not* are all attested in these clauses. Therefore, any difference between clauses is one of frequency of the various forms.

(235) Conditional *if*-clauses:

- a. Yef sho wil noht amende, þe reule of discipline sal sho fele
 If she will not repent, the rule of discipline shall she feel
 'if she will not repent, she shall feel the rule of discipline'
 (CMBENRUL,44.1356)
- b. And therefore be we alle born sones of wratthe and of dampnacioun
 And therefore be we all born sons of wrath and of damnation
 perdurable, if it nere baptesme that we receyven
 perdurable, if it NEG-were baptism that we receive
 'and therefore be we all born of wrath and damnation if it were not for
 the baptism we receive...'
 (CMCTPARS,297.C1.377)
- c. ʒef heo hit ne bihat naut heo hit mei don...
 if she it NEG promises not she it may do...

'if she doesn't promise it, she may do it...'

(CMANCRIW,I. 46.56)

(236) Clauses within the scope of negation:

- a. but he is not anoumbered among þe emperoures because he regned
but he is not numbered among the emperors because he reigned
not upon Itaile...

not in Italy

'but he is not counted amongst the emperors because he did not reign
in Italy'

(CMCAPCHR,90.1771)

- b. Ye ne ete nouȝt wyþ þe prude eȝe, and wiþ hert þat ne
You NEG eat not with the proud eye, and with heart that NEG
may nouȝt be fulfild
may not be fulfilled

'Do not eat with a proud eye and with a heart that may not be satisfied'

(CMEARLPS,121.5305)

- c. "it may nat be," seith he, "that where greet fyr hath longe tyme
"it may not be," said he, "that where great fire has long time
endured, that ther ne dwelleth som vapour of warmness."
endured that ther NEG dwells some vapour of warmness."

' "it may not be," he said "that where a great fire has been for a long
time that it isn't warm there" '

(CMCTMELI,223.C2.269)

- (237) a. Many ther ben whiche have not this grace...
Many there are who have not this grace...

'there are many who do not have this grace'

(CMAELR4,23.702)

- b. And thus scholde it seme þat the prophecyes ne were not trewe
And thus should it seem that the prophecyes NEG were not true

'And thus it should seem that the prophecies were not true'

(CMMANDEV,51.1252)

- c. Mid þan is itacned þet cristene men ne sculen heore bileafe
With that is signalled that Christian men NEG ought their belief
bisettan on þere weordliche eahte; ac on heore god ane
set on the worldly possessions; but in their God only

'that signifies that Christian men ought not trust in worldly things,
but in God only'

(CMLAMBX1,101.912)

Jack (1978b) does not observe these contextual differences in the frequency of *not* in his work on Early Middle English.⁵ Kroch's model predicts that the differences between the contexts in respect of the frequency of *not* should hold throughout the introduction of *not*. Therefore, quantitative examination of Early Middle English should show the same distribution of *not* across these contexts. All types of subordinate clauses are included in the database, including complement clauses (236c), adverbial clauses and relative clauses (236a, 236b) except *if*-clauses which are also subordinate to a negative. These were excluded. It is difficult to determine under which context these should be subcategorised, as there are potentially two factors influencing the distribution of *not* in these clauses.

So, there are four potential contexts for change under Jespersen's Cycle to be examined quantitatively: clauses within the scope of negation, conditional clauses introduced by *if*-, other subordinate clauses and main clauses. Clauses with negatives other than *ne* or *not*, such as negative NPs or adverbs are excluded. Section 5.4 discusses the distribution of *ne* and *not* in these clauses. Frisch (1997), Jack (1978a) claim that clauses with negative NPs or adverbs resist the introduction of *not*. Clauses involving the construction *ne...but* meaning 'only' (238) were also excluded. These are considered separately in section 5.7.3. It is not clear that *ne* marks sentential negation in these clauses. The meaning of the whole *ne...but* construction is non-negative. Clauses in which *ne* is clearly redundant (239) were also excluded (see section 4.6 for discussion of redundant *ne*).

(238) ...certes by nature ther nys but o God
 ...truly by nature there NEG-is but one God
 '...truly by nature there is only one God'
 (CMBOETH,433.C1.183)

(239) And of alle thise things ther nis no doute that thei ne ben don
 And of all these things there NEG-is no doubt that they NEG are don
 ryghtfully and ordeynly...
 rightfully and as ordained...
 'and of all these things there is no doubt that they are done rightfully and
 as ordained...'
 (CMBOETH,453.C2.536)

⁵Jack (1978b) does mention that *ne* is exclusively used in negative interrogatives in the Early Middle English texts he has examined (Jack 1978b, 301).

The data will be subdivided as in (240), so that the effect of each clausal context on the introduction of *not* and the loss of *ne* can be measured.

- (240) a. *ne>ne...not*
 b. *ne...not>not*

Table 5.10 presents the overall frequency of the secondary negator *not* in the 'Total *not*' column. As discussed earlier, the overall frequency of *not* combines instances which do and do not co-occur with *ne*. The important point is to describe the introduction of *not*: *not* and unsupported *ne* are in complementary distribution throughout the change. It is irrelevant to this part of the analysis whether *not* co-occurs with *ne* at stage two of Jespersen's Cycle, because I distinguish this supported form of *ne* as a separate lexical item, subject to a different change.

The 'TOTAL' column includes *ne*, *ne...not* and *not*. It excludes instances of *ne* which co-occur with negatives other than *not*.

Period	in scope of negation			<i>if</i> -cls			other sub cls		
	<i>not</i>	TOTAL	% not	<i>not</i>	TOTAL	% not	<i>not</i>	TOTAL	% not
1150-1250	7	52	13%	17	59	29%	327	888	37%
1250-1350	8	22	36%	8	13	62%	195	325	60%
1350-1420	60	77	78%	65	74	88%	1167	1234	95%
1420-1500	41	41	100%	40	40	100%	973	1005	97%

Table 5.10: The frequency of *not* (including *not* in *ne...not* and *not*) in subordinate clauses in scope of negation, and in conditional *if*-clauses.

Table 5.10 shows that *not* is less frequent in subordinate clauses within the scope of negation than in other subordinate clauses in the period 1150-1420. The differences between *if*-clauses and subordinate clauses outside the scope of negation are very small and only statistically significant under χ^2 -tests for the period 1350-1420 at the 0.025 level.

Clause	<i>not</i> (incl <i>ne...not</i>)	unsupported <i>ne</i>	
<i>if</i> -clauses	65	9	Chi ² =5.78
other sub cls	1167	67	p≤0.025

Table 5.11: Chi-square test showing a significant difference between the distribution of *not* in *if*-clauses and other subordinate clauses (outside the scope of negation) for the period 1350-1420.

The frequency of *not* in *if*-clauses does not differ significantly from the frequency of *not* in other subordinate clauses, except in the period 1350-1420. Therefore, I conclude that *if*-clauses are not a distinct context for the introduction of *not*

in ME, so I will not separate *if*-clauses as a distinct context in the remainder of this chapter.

The differences between subordinate clauses within the scope of negation and those outside the scope of negation⁶ are clearer. These differences are statistically significant under χ^2 tests. Table 5.12 shows the χ^2 and p values obtained under χ^2 tests when the distribution of *not* in subordinate clauses within and outside the scope of negation is compared against the frequency of unsupported (stage one) *ne* in each of the two contexts. χ^2 tests are performed on the data for each period to 1420. Hence all the tests in Table 5.12 are performed with one degree of freedom. The difference between the contexts is unlikely to be coincidental, or due to the distribution of the admittedly small amounts of data from clauses within the scope of negation. Figures for the period 1420-1500 show that all tokens in clauses within the scope of negation involve *not*, this means that statistically significant differences between the two contexts cannot be demonstrated by means of χ^2 -tests.

Period	outside scope of negation		in scope of negation		χ^2	p \leq
	ne	Total not	ne	Total not		
1150-1250	603	344	45	7	11.31	0.001
1250-1350	135	203	14	8	4.78	0.05
1350-1420	76	1232	17	60	30.72	0.001
1420-1500	32	1013	0	41	Unable to run	

Table 5.12: The results of chi-square tests comparing the distribution of clauses subordinate to a negative and clauses in the 'other' group. All under one degree of freedom.

These data indicate that the change in morphosyntactic features resulting in stage two of Jespersen's Cycle is sensitive to a superordinate negative. This factor persists throughout the Middle English data from the earliest period. Figure 5.1 illustrates the distribution of unsupported *ne* in these contexts.

I will now compare the distribution of *not* in main and subordinate clauses.⁷ The figures are presented in Table 5.13 in the same way as in Table 5.10. The figures for subordinate clauses come from Table 5.10. The data shown in Table 5.13 are also shown in Figure 5.1. In interpreting Figure 5.1 it is important to note that the x-axis does not represent time as a linear continuum, and that the four periods represented are not of equal length. The resulting plots of the change in

⁶Which includes the *if*-clauses previously separated in Table 5.10.

⁷Outside the scope of negation, but including *if*-clauses.

various contexts are approximate only, and should be regarded as an indication of the relationship holding between the three contexts in four distinct periods, rather than a plot of change across time.

Period	Main clauses			Subordinate clauses		
	Total <i>not</i>	TOTAL	% not	Total <i>not</i>	TOTAL	% not
1150-1250	357	541	66%	344	947	36%
1250-1350	424	481	88%	203	338	60%
1350-1420	1137	1169	97%	1308	1243	94%
1420-1500	1006	1010	99.6%	1045	1005	97%

Table 5.13: The frequency of *not* (including *not* in *ne...not* and *not*) in main and subordinate clauses.

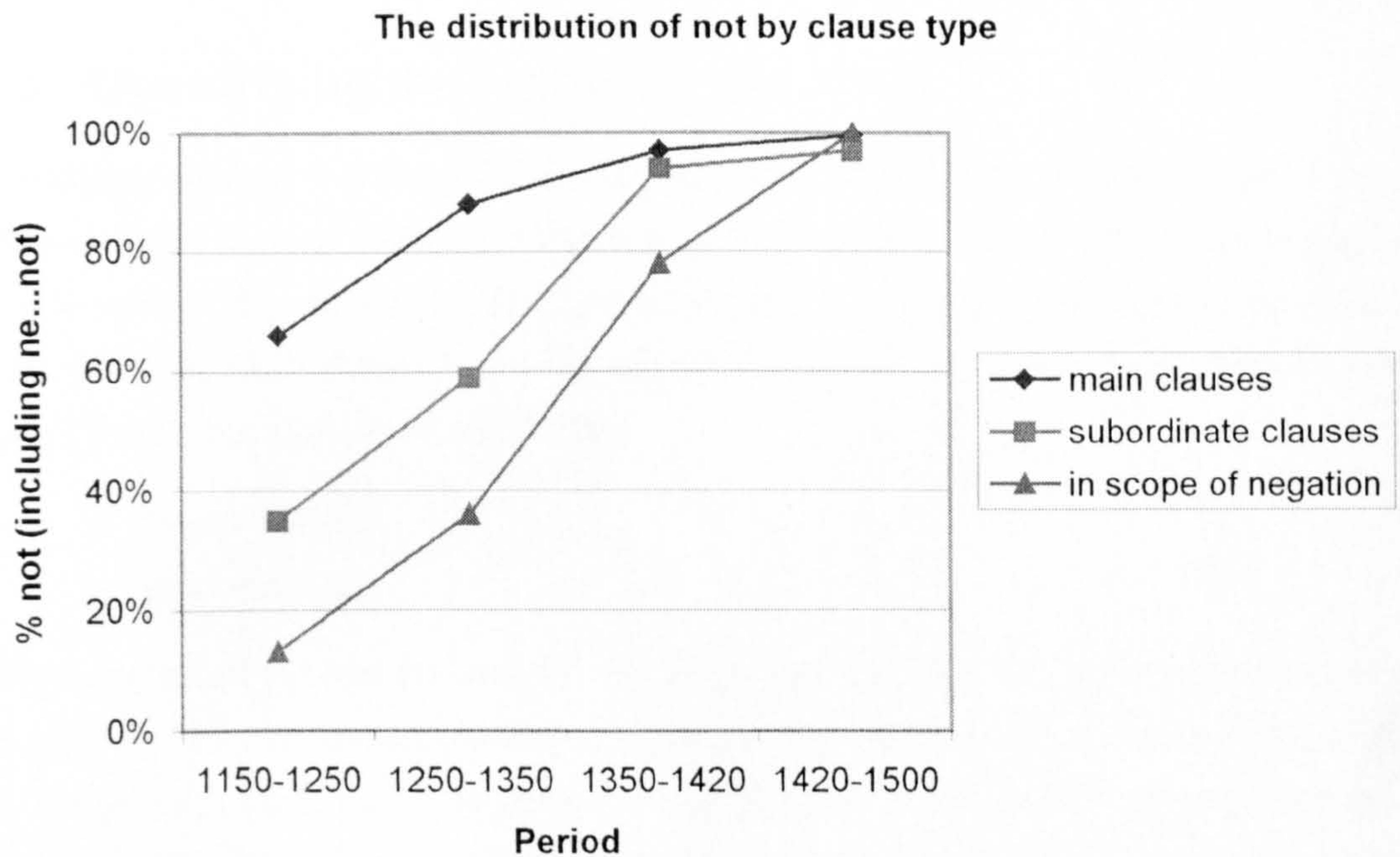


Figure 5.1: The distribution of *not* in main clauses, subordinate clauses and clauses within the scope of negation.

The differences between main and subordinate clause contexts for each period are statistically significant under χ^2 tests (Table 5.14). All tests performed under one degree of freedom.

The findings of this section demonstrate contextual influences on the rise of *not* (at the expense of unsupported *ne*). The evidence from change supports the

Period	Main clauses		Subordinate clauses		χ^2	p \leq
	ne	Total not	ne	Total not		
1150-1250	184	357	603	344	121.59	0.001
1250-1350	57	424	135	203	87.28	0.001
1350-1420	32	1137	76	1232	13.98	0.001
1420-1500	4	1006	32	1013	21.21	0.001

Table 5.14: The results of chi-square tests comparing the distribution of main and subordinate clauses. All under one degree of freedom.

idea that there are three contexts. The relevant contexts are main clauses, subordinate clauses and clauses within the scope of negation. Being within the scope of other non-assertive polarity operators has no discernible effect on the frequency of the innovative form *not*. Frisch fails to take these contextual factors into account.

5.4.2 Quantifying the decline in use of *ne*

I hypothesized that the loss of the morpheme *ne* affects only those instances of *ne* in clauses where *ne* is redundant to the morphological identification of negation because *not* is also present. This avoids negative clauses in which negation is not morphologically identified. Therefore, the loss of *ne* is contingent upon, and follows the introduction of *not* (241b).

- (241) a. *ne*>*ne...not*
 b. *ne...not*>*not*

Unsupported *ne* has no role in or effect on the loss of the morpheme *ne* in this model. Hence unsupported *ne* can be excluded from examination of the later stages of Jespersen's Cycle, as the morpheme *ne* can only be eliminated once negation is identifiable elsewhere in the clause. I will examine the transition from stage two to stage three of Jespersen's Cycle (which I describe as the 'loss of *ne*') without any reference to stage one unsupported *ne*.

The loss of *ne* characterised in this way is distinguished from the introduction of *not* described in the previous section, by the role which contextual differences play in the change. Subdividing the data according to the three contexts found relevant for the introduction of *not* above demonstrates no such differences between these contexts for the loss of *ne*. The change takes the same time course in all clausal contexts. The relevant data are shown in Table 5.15, which separates main clauses, subordinate clauses, and clauses within the scope of negation.

Period	Main clauses			Subordinate clauses			In scope of negation		
	ne.. not	Total not	% ne... not	ne... not	Total not	% ne... not	ne... not	Total not	% ne... not
1150-1250	354	357	99%	326	327	99.7%	6	7	86%
1250-1350	361	424	85%	174	195	89%	6	8	75%
1350-1420	126	1137	11%	146	1021	13%	6	60	10%
1420-1500	4	1006	1%	10	963	1%	1	41	2%

Table 5.15: The frequency of *ne* in the context of *not*. PPCME2 data subdivided by clause type.

The lack of contextual differences is most clearly demonstrated by comparison of main and subordinate clauses. Differences between the frequency of supported *ne* in main clauses and subordinate clauses are not statistically significant under χ^2 -tests for any ME period. The distribution of supported *ne* in clauses within the scope of negation is not demonstrably different from the distribution of supported *ne* in main or subordinate clauses. Given the propensity of clauses within the scope of negation to use unsupported *ne* until the late Middle English period, the number of clauses involving *not* under investigation here is small, particularly for the periods to 1350. There are too few data to perform χ^2 -tests on the data for the periods 1150-1250 and 1250-1350 to compare the distribution of supported *ne* in this context with the other clausal contexts. In the late Middle English periods following 1350, for which there are more data, clauses within the scope of negation pattern just like main and subordinate clauses. These data do not give sufficient reason to suppose that the loss of *ne* patterns differently in this context.

The parallels between the loss of *ne* in the three clausal contexts with *not* are illustrated in Figure 5.2. In interpreting Figure 5.2, note that the x-axis does not represent time as a linear continuum. Texts are subdivided into four periods of unequal lengths. The resulting plot is only an approximate representation of the change under discussion, but is sufficient to demonstrate the lack of differences between the contexts examined.

When the loss of *ne* is considered in this way, splitting the negative *ne* into two groups according to its co-occurrence with other negatives, clause type is seen to have no effect on the transition from stage two to stage three of Jespersen's Cycle, whereas it conditions the transition from stage one to stage two, resulting in statistically significant differences between the contexts.

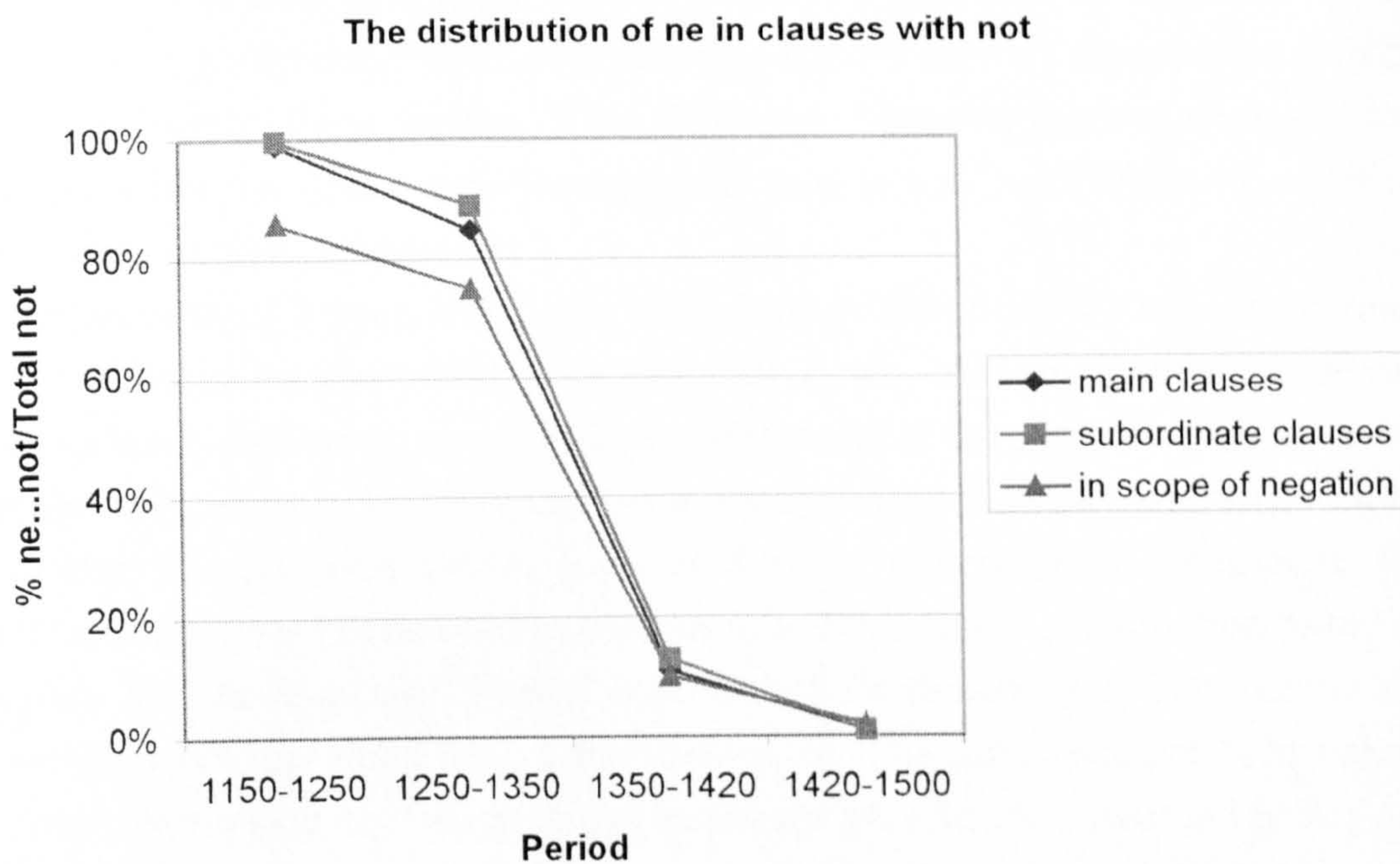


Figure 5.2: The frequency of *ne* in the context of *not*. Main and subordinate clauses.

5.5 An alternative syntactic model of Jespersen's Cycle

The differences between the two changes, the introduction of *not* and the loss of *ne* as described above provides empirical support for the relationship between the two changes I proposed in section (242).

- (242) a. *ne* > *ne...not*
 b. *ne...not* > *not*

The effect of clausal context on the two changes is clearly different. (242a) is sensitive to morphosyntactic conditioning factors such as clause type. (242b) is not sensitive to these factors. This difference between the two changes only emerges when the data are subcategorised in this way, and when two distinct forms of *ne* are distinguished.

My account of Jespersen's Cycle differs from Frisch (1997) because it takes *ne...not* to be an independent stage relevant to the change. Therefore, *ne...not* needs to be characterised as an independent stage at the morphosyntactic level. A distinction needs to be made between unsupported *ne* which cannot be eliminated from the grammar, and *ne* supported by *not* which can be eliminated. The Minimalist analysis I presented in chapter 4 facilitates such a distinction based on morphosyntactic features. There, I argued that the dependency between *ne* and *not* results from unvalued [pol:] features on *ne*. The difference between valued [pol:neg] features on *ne* at stage one of Jespersen's Cycle and unvalued [pol:] features on *ne* at stage two, allows the two relevant types of *ne* to be distinguished.⁸ The effect of spell-out will be to eliminate the [pol:] feature of *ne* when it is valued during the derivation, leaving stage two *ne* without any LF interpretation. *ne* is an agreement morpheme and is therefore redundant. The loss of *ne* eliminates *ne* in just those cases when it is redundant at LF. Elimination of the morpheme *ne* leads to a less abstract representation of negation, and restores the correspondence between PF and LF markers of negation which was lost when *ne* became an agreement marker. In this account, however, the role of *ne* is crucial. The change in morphosyntactic features on *ne* drives Jespersen's Cycle by initiating a dependency with *not*. Only once this dependency is in place can *ne* be lost.

⁸In effect, this states that all *ne* at stage two of Jespersen's Cycle are redundant or expletive *ne*. Parallels between the distribution of redundant *ne* and *ne...not* over time support this conclusion (see chapter 4).

This approach to Jespersen's Cycle allows it to be analysed as two processes of grammatical competition targeting a head with polarity features (perhaps Neg^0 or Pol^0 , but not necessarily, see chapter 4 for discussion). The first involves competition between $[\text{pol}:\text{neg}]$ and unvalued $[\text{pol}:]$ features, the second change is restricted to a head with unvalued $[\text{pol}:]$ features, and is between the morphological representation of this head as *ne* or null. The first change operates at the level of morphosyntax, it makes reference to clause typing features and scope relations for example. The second change does not necessarily operate at the syntactic level. It makes no reference to syntactic contextual factors, and operates uniformly. Therefore it may be postsyntactic, operating at spell-out to eliminate the morpheme *ne* just when it is redundant at LF.

- Stage One: unsupported *ne*: a semantically interpretable $[\text{pol}:\text{neg}]$ feature is associated with a head position in the syntax. This head position may be Neg^0 , if NegP is assumed in some form. However, there is no reason why it must be associated with Neg^0 , and no evidence to postulate a distinct functional projection for negation unless this is forced by the formal framework, as in Government-Binding theory, or Distributed Morphology. In later Minimalist work, Chomsky proposes that functional projections are checking positions for morphological features of items which enter the derivation fully inflected. At this stage there is no need for a checking position to be associated with negation.
- Stage Two: supported or bipartite *ne*: a semantically unvalued $[\text{pol}:]$ feature is associated with a head position in the syntax. The head has the overt morphological realisation *ne*. This feature initiates a syntactic dependency, requiring a specifier element to be introduced. In the case of *ne...not* this dependency is satisfied by Merge of *not*, and the $[\text{pol}:]$ feature on *ne* is valued and deletes at spell-out.
- Stage Three: unsupported *not*: The distribution of *not* does not change immediately upon the loss of *ne*. It retains the distribution of a phrasal specifier or adverbial element. However, there is no evidence that *not* enters into a syntactic dependency at this stage. In the absence of morphological evidence for a dependency, it may be that *not* is reanalysed as an unselected vP-adjunct like *nicht* in German.

This view of each stage of Jespersen's Cycle allows a model of grammatical competition to be constructed which has two processes of competition between

heads which are structural competitors. The first process of competition is between valued and unvalued polarity features. This has the effect of introducing a syntactic dependency with *not*. The second process of competition is between a head which has the feature [pol:], and one which does not.

By ordering the changes across time as two stages in the morphosyntactic weakening of *ne*, there is no need for independent identification principles on negation. Any item with [pol:] features must be morphologically identified as negative. The loss of the morpheme *ne* leads to the loss of [pol:] features on a syntactic head. Morphological marking of negation on an element bearing unvalued [pol:] is redundant and duplicates the morphological marking of negation which is already present on *not*. It follows that items with [pol:] features must be morphologically identified, but second, that the duplication of negative morphology in *ne...not* creates pressure for the loss of *ne*, both the morpheme *ne* and the morphosyntactic feature [pol:] which is responsible for the syntactic agreement between the two negatives.

Not only is the model I propose syntactically justifiable in a Minimalist framework which allows two types of *ne* to be formally distinguished, it provides a more insightful and economical view of the changes involved in Jespersen's Cycle on two grounds. First, it allows two empirically distinct processes of change to be distinguished in a principled way. Second, it does not require a stipulation to rule out clauses where negation is not morphologically identified, or require any null elements in the syntactic representation of negation. That follows from the ordering of changes, so that the first change creates negative agreement morphology on a head, and the second change eliminates the morphological reflex of that agreement, as it is rendered redundant by the rise of a syntactic dependency which introduces another negator. This chapter demonstrates the advantages of postulating two types of *ne* at successive stages of Jespersen's Cycle on empirical grounds as well as formal theoretical grounds. The ability to distinguish two types of *ne* allows the three stages of Jespersen's Cycle to be formally distinct and independent of each other, linked by two changes with different properties. The *ne...not* stage involves no syntactic redundancy. The redundancy is solely morphological, and arises because the morpheme *ne* is only lost when the unvalued feature [pol:] is lost, rather than when the valued [pol:neg] is lost.

5.6 Speculations on the character of later changes under Jespersen's Cycle

The loss of *ne* removes the evidence for a syntactic feature checking dependency at stage three of Jespersen's Cycle. The only dependencies involved in negative clauses are those for which there is overt morphological or syntactic evidence. With the loss of *ne*, the conservative nature of the language learner and his/her preference for more economical representations mitigates against an analysis under which the distribution of *not* is determined by the same syntactic dependency as was morphologically evidenced in bipartite *ne...not* negation. Under a Minimalist framework, economy receives a precise syntactic correlate: derivations without feature valuing dependencies are more economical than those with feature valuing dependencies. The introduction of unvalued features into a derivation necessitates additional operations of Merge or Agree, hence the learner's inductive bias will seek to eliminate unvalued features wherever syntactic or morphological evidence for these unvalued features is weak. This makes the possibility of syntactic reanalysis by subsequent generations of language learners quite likely. The loss of *ne* eliminates unvalued [pol:] features.

Not will be reanalysed as an unselected adverbial element adjoined to vP rather than a specifier element, thereby eliminating the feature checking dependency which introduces *not* as a specifier. At the syntactic level, Jespersen's Cycle will involve alternation between two syntactic representations (243).

- (243) a. Stage one: [pol:neg]
 b. Stage two: [pol:]... [pol:neg]
 c. Stage three: [pol:neg]

Van Kemenade (2000) proposes the fourth stage of Jespersen's Cycle is reanalysis of *not* as the head Neg⁰. Van Kemenade identifies some empirical evidence for the reanalysis of *not*. Its distribution changes so that it can appear adjacent to the finite verb in cases of V to C movement across a subject pronoun.⁹ Two orders are compared: (244) and (245).

⁹The view that *not* is reanalysed as a clitic on the finite verb in C⁰ depends on there being no position between the finite verb and subject pronoun which could host *not*. Therefore, the analysis relies on the spec,AgrP placement of subject pronouns, and assumes that the position of pronominal subjects remains constant throughout the entire Middle English period. It is necessary to evaluate this assumption. Haeberli (2002c) shows an increase in inversion of finite verbs and subject pronouns in late Middle English non-operator declarative clauses. If these have the

- (244) ... finite verb - *not* - subject pronoun
- a. Therefore is not he acountid among þe emperoures
Therefore is not he counted among the emperors
'Therefore he is not counted among the emperors'
(CMCAPCHR,91.1792)
 - b. Xal not I don so?
Shall not I do so?
'Shan't I do so?'
(KEMPE,50.1133)
 - c. And sire, by youre leve, that am nat I
And sir, by your leave, that am not I
'And sir, by your leave, that I am not'
(CMCTMELI,221.C1.148)
- (245) ... finite verb - subject pronoun - *not*
- a. Seest thou not how oure Lady wepith?
See you not how our Lady weeps?
'Do you not see how our Lady weeps?'
(CMAELR4,21.642)
 - b. þat wyl I not grawnt 3ow
that will I not grant you
'I will not grant you that'
(CMKEMPE,24.504)
 - c. Why sholde I nat ryde this way?
Why should I not ride this way?
'Why should I not ride this way?'
(CMMALORY,195.2940)

There are few examples of (244) in the PPCME2: 1 in the period 1350-1420 and 6 in the period 1420-1500. (n=6/94 or 6%) There are no examples in earlier periods, suggesting an incipient change at the end of the late Middle English period, whose beginnings appear in the mid 15th century, at a time when *ne* is only residually present. Further data from the Early Modern English period are

finite verb in Agr⁰, inversion of finite verb and subject pronoun indicates a lower spec,TP position for the subject pronoun. A shift in the position of subject pronouns could equally account for the different distribution of *not* relative to pronoun subjects. It is necessary to determine whether the change in distribution observed for *not* is particular to *not*, or is also seen with adverbial phrasal adjuncts to TP. If it is particular to *not*, then this is good evidence for a change in the syntax of *not*.

needed to follow this change further and to describe it in more detail. Rissanen (1994; 1999) provides data concerning the relative positions of *not* and subject pronouns in Early Modern English interrogatives. His figures show an increase in inversion of *not* and a subject pronoun in Early Modern English: n=19/77 or 25% in the period 1500-1570 of the Helsinki Corpus (figures based on Rissanen (1999, Table 4)).

English differs from other Germanic languages in the development of a negative head in Early Modern English. German *nicht* and Dutch *niets* remain vP adjuncts. The reasons why English developed a negative head are outside the scope of this thesis, as we can see that this development postdates the Middle English period. More work needs to be done in this area.

There are further changes to the syntax of negation in the Early Middle English period which may be amenable to analysis in terms of features, and have been analysed as part of Jespersen's Cycle. As generalised V to T movement is lost, negation comes to co-occur only with lexicalised T, whether lexicalised by verb movement or *do*-support. The emergence of an independent modal or aspectual categories, coupled with the loss of generalised V to T movement, may initiate an reanalysis of the host for [neg] features, from the v,T or Neg heads, to the head of a modal (M^0) projection or an aspectual (Asp^0) projection. This development might be important in the development of the negative head *n't*. The development of new restrictions on the distribution of *not* can be thought of as a redistribution of [pol: neg] or [pol:] features in the lexicon so that they are associated with modals and aspectuals only (cf. Ernst (1992)). If this analysis is correct, Present-Day standard English negation need make no reference to the independent syntactic projection NegP, instead, [neg] features are parasitic on modals and aspectuals. Ernst (1992) pursues this kind of analysis of Present Day English *not*.

5.7 Jespersen's Cycle and multiple negation

I will now turn my attention to the progress of the two changes (introduction of *not*, loss of *ne*) in clauses which involve negative arguments or adjuncts. Jespersen's Cycle does not progress in the same way in these clauses. Frisch (1997) notes these difficulties, and leaves clauses which have negative arguments or adjuncts out of his analysis. The situation is quite complex. We see that whilst *not* is not generally introduced into multiple negation contexts in Middle English, *ne*

is lost from these same contexts during Middle English. Here, the relationship between the loss of *ne* in all its contexts is examined using Middle English data. I show that the loss of *ne* proceeds in the same way irrespective of whether it is supported by *not* or in multiple negation with some other negative word. The presence of *not* is not a precondition for the loss of *ne* in all contexts as my model of Jespersen's Cycle proposes.

The question arises of how to integrate multiple negation contexts into the diachronic and syntactic model. This section will outline the empirical diachronic data and the problems these data pose to the model of change, but for a syntactic discussion and interpretation of these data see chapter 6. The relationship between the loss of *ne* and introduction of *not* in multiple negation contexts differs from the relationship between the two changes in the contexts already examined. The introduction of *not* is not a prerequisite for the loss of *ne* in all contexts. The model must be able to relate the loss of *ne* in multiple negation to the loss of *ne* elsewhere, whilst accounting for fact that *ne* is not replaced by *ne...not* or *not* in all clauses which contain a negative adverb or negative quantifier.

5.7.1 *Not* in the context of negative NPs or adverbs

Jack (1978a;b) claims that *not* is rarely introduced in clauses with negative NPs or adverbs.

Clauses containing a negative form such as *never* or *no...* show some degree of regularity in the choice of adverbs of negation [Jack's term for *ne* and *not*]. These clauses may contain an adverb of negation, but need not. When an adverb of negation is used in a clause of this kind it is generally *ne*, the forms *not* and *ne...not* being distinctly uncommon. I have noted 272 instances with *ne*, beside twenty-eight with *not* and thirty-five with *ne...not*.

(Jack 1978a, 62)

Not is not in complementary distribution with negative arguments or adjuncts in late Middle English (246),(247), although it is infrequent in these contexts, either with *ne* (246) or without it (247).

- (246) a. ...thou *ne* schalt nat seen in no place no thing of yvel
 ...you NEG shall not see in no place no thing of evil
 '...you shall see nothing of evil anywhere'
 (CMBOETH,454.C2.565)

- b. Gret grace is it of God whan þe wille of a man or a womman is so
Great grace is it of God when the will of a man or a woman is so
harde and roted fast in God þat he ne may not wawe for no
hard and rooted fast in God that he NEG may not waiver for no
temptacion.
temptation.
'God's grace is great when the will of a man or a woman is so firm and
rooted fast in God that he may not waiver despite any temptation.'
(CMVICES4,106.180)
- (247) a. he schuld not begynne no werre withoute the same counsell
he ought not begin no war without the same advice
'he ought not to begin any war without the same advice'
(CMCAPCHR,137.3171)
- b. And thenn our soverayne myght not no longer hyde his maryage
and then our sovereign might not no longer hide his marriage
'and then our sovereign might no longer hide his marriage'
(CMGREGOR,227.2288)

The lack of absolute complementary distribution indicates that there is no structural reason to bar *not* from clauses involving negative NPs or adverbials. Rather this is a context in which *not* is much less frequent. In Late Middle English, clauses in which *not* co-occurs with negative arguments (246a) or adverbials, such as PPs (247b) are attested, but their frequency is marginal.

Out of 5379 clauses involving *not*, there are only 113 (2%) examples of *not* co-occurring with a negative phrase (argument or adverbial). Therefore, multiple negation contexts must be excluded from Frisch's redundant licensing model, and distinguished from other contexts for the introduction of *not* in some way. Frisch (1997) acknowledges this problem, and proposes to exclude *ne* in multiple negation from his redundant licensing model.

Recall that the use of *ne* in negative concord situations [multiple negation] was excluded from the quantitative analysis. If these tokens are included, the model of the use of *ne...not* as redundant licensing fails to provide an adequate fit. Without the analysis of redundant licensing the other results in this paper are difficult to explain.

(Frisch 1997, 57)

Frisch's account provides no basis to distinguish negative clauses in which the introduction of *not* goes to completion in Middle English (main clauses, sub-

ordinate clauses) from those in which the introduction of *not* is marginal (clauses with negative arguments or adjuncts). This decision leaves unaddressed the issue of the relationship between Jespersen's Cycle and multiple negation. This section has established that *not* is not introduced into multiple negation in the same way that it is introduced elsewhere, whilst leaving aside the reasons for this. I will return to discuss these in chapter 6.

5.7.2 The loss of *ne* in negative doubling

At the empirical level, we see that negation is redundantly morphologically identified in negative doubling just as in the *ne...not* construction, although it remains to be seen whether *ne...not* and negative doubling are morphosyntactically equivalent feature checking configurations (see section 6.5). These parallels between *ne...not* and negative doubling extend to quantitative analysis of the loss of *ne*. These data present a strong case for the syntactic equivalence of *ne...not* and negative doubling. The loss of *ne* in negative doubling is exactly parallel to the loss of *ne* in the context of *not*. Two contexts demonstrate this: clauses with the negative adverb *never* (248), and all clauses with negatively quantified NPs such as *nothing* (249). These are referred to as 'never' and 'no+NP' in Table 5.16. Table 5.16 shows the frequency of *ne* in these two contexts, comparing them with the frequency of *ne* in the context of *not* (250).

(248) Negative doubling with negative adverbial:

- a. þat þai nolde neuer speke with ham ...
that they NEG-would never speak with him ...
'that they would never speak with him ...'
(CMBRUT3,99.2990)
- b. and þow seist "whoeuere kepuþ my word schal neuere dyze."
and you say "whoever keeps my word shall never die"
'and you say "whoever obeys my commands shall never die"
(CMWYCSER,420.3488)

(249) Negative doubling with negative NP argument:

- a. And thei seye þat þere nys no purgatorie ...
And thay say that there NEG-is no purgatory ...
'And they say there is no purgatory ...'.
(CMMANDEV,12.242)

- b. they hade no power to speke.
they had no power to speak
'They had no power to speak'
(CMSIEGE,93.728)

(250) *ne...not* construction:

- a. I nel not go fro þe,
I NEG-will not go from you
'I will not leave you'
(CMAELR3,50.775)
- b. and he may not falle to synne siþ he is riȝtwisnesse hymself.
and he may not fall to sin since he is righteousness himself.
'and he may not sin since he is righteousness itself.'
(CMWYCSE,1,477.3629)

Period	negative NP			never			not		
	ne	Total	% ne	ne	Total	% ne	ne	Total	% ne
1150-1250	493	520	95%	264	286	92%	686	691	99%
1250-1350	168	189	89%	15	16	94%	541	627	86%
1350-1420	111	1022	11%	25	274	9%	278	2086	12%
1420-1500	12	1018	1%	3	374	1%	24	2020	1%

Table 5.16: The overall distribution of *ne* by date.

The frequency of *ne* in the context of *never* or negative NPs is compared with the frequency of *ne* in the context of *not*, to determine whether the frequency of *ne* in the negative doubling contexts differs significantly from the frequency of *ne* in the context of *not* under χ^2 -tests for each period of Middle English.

Comparing the frequency of *ne* in the context of negative NPs with the frequency of *ne* in the context of *not* yielded no significant differences between the frequencies of *ne* for the periods following 1250. The frequency of *ne* in the *not* context differs significantly from the frequency of *ne* in the negative doubling contexts in the period 1150-1250. The two negative doubling contexts do not differ significantly from each other at this period. Hence the negative doubling contexts (negative NPs and *never*) can be combined, giving 757 negative arguments or adjuncts with *ne* and 49 without *ne* compared to 686 instances of *not* with *ne* and only 5 without *ne*. The difference between these contexts in 1150-1250 is highly significant: $\chi^2=30.69$, $p\leq 0.001$, 1 degree of freedom. Establishing the reasons for this difference is an area for further investigation.

Figure 5.3 graphically represents the distribution of *ne* in the three contexts. If we look at the periods following 1250, there is no evidence for any differences in the loss of *ne* in negative doubling and *ne...not* contexts. There is no evidence for different rates of change. More strikingly, there is no evidence for any intercept or frequency differences between the contexts. The loss of *ne* apparently proceeds as a single change wherever *ne* occurs in the context of another negative, whether that negative is *not*, *never* or a negatively quantified NP. Contexts for the loss of *ne* cannot be differentiated either in terms of rate of change or the intercept parameter.

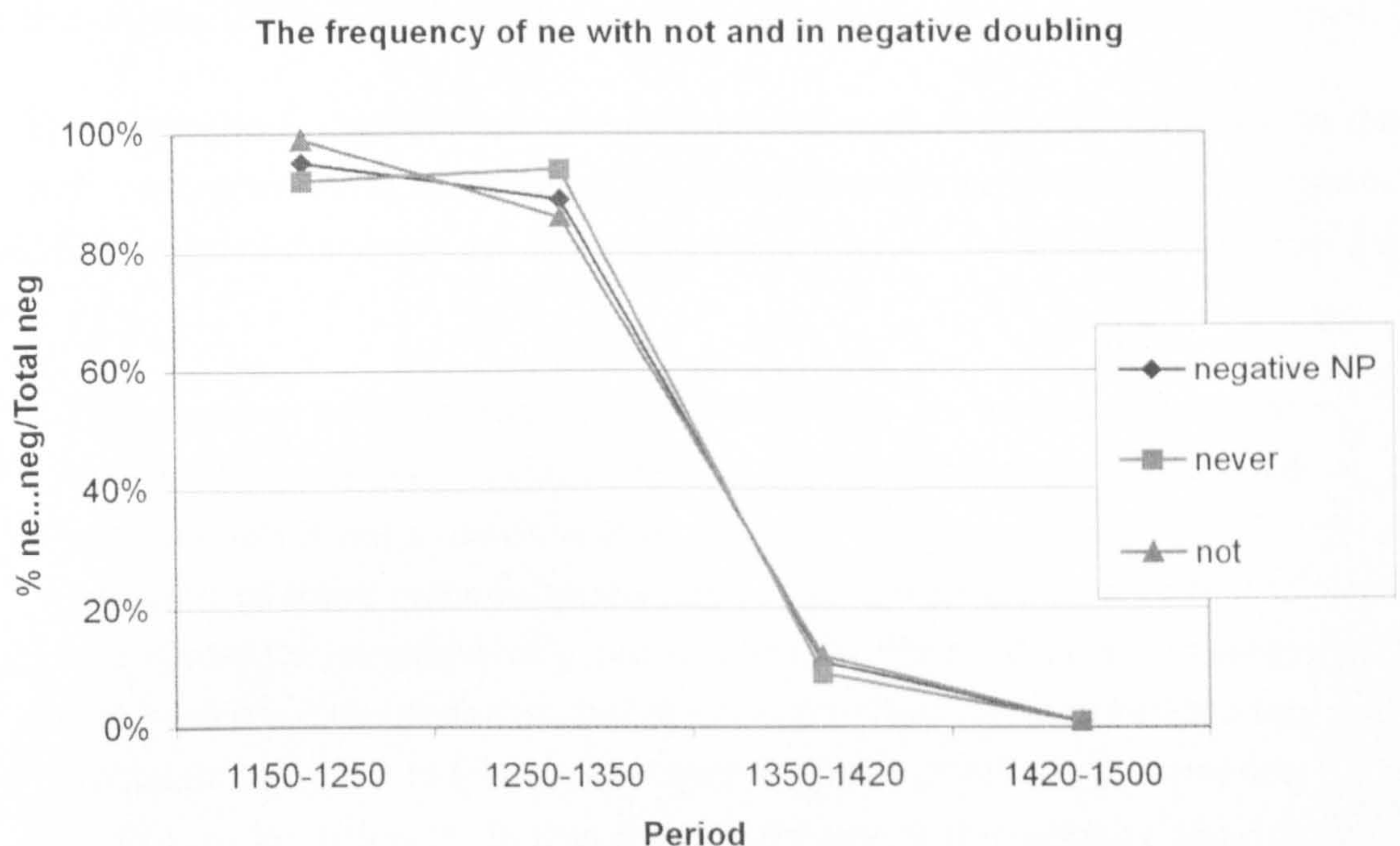


Figure 5.3: The frequency of *ne* in the context of *not*, *never* (negative doubling) and the sentential negator *not*.

The distribution reflected in Figure 5.3 is not necessarily an accurate reflection of a process of diachronic change. It does not isolate change from other factors which may influence the frequency of *ne*. These factors may include dialect and genre. There is discontinuity in the dialects represented at the earlier periods 1150-1350 and the later periods 1350-1500. It is possible that the survival of *ne* is linked to dialect. Idiomatic factors also prove important. The frequency of *ne* is particularly high in the late 14th century works of Chaucer which are included in the PPCME2. The frequency of *ne* in Chaucerian texts affects the overall fre-

quency of *ne*, making it higher than it otherwise would be if the works of Chaucer were not over represented in the data for this period. However, biases in the data do not affect my overall conclusions: whatever the overall frequency of *ne* in particular groups of texts, its frequency is the same in all the linguistic contexts investigated (see Table 5.17).

Texts	not		never		neg NP	
	with ne	total	with ne	total	with ne	total
Chaucer ¹⁰	81 (40%)	204	6 (24%)	25	47 (38%)	124
Others	45 (5%)	939	7 (6%)	115	30 (7%)	450

Table 5.17: The distribution of *ne* in the contexts of *not*, *never* and negative NPs for the period 1350-1420. Texts by Chaucer considered separately. Main clauses.

The distinction which Frisch makes between *ne* as a sentential negator in the *ne...not* construction and *ne* as 'negative agreement' (Frisch 1997, 33) in negative doubling implies that there are two processes by which these two types of *ne* are lost.

These uses of *ne* in negative concord situations are excluded from the quantitative analysis... I claim that the use of *ne* in a negative concord construction is not a use of *ne* in its function as sentential negator. The use of *ne* in these cases is apparently not as a true sentential negator, to express the negation of a proposition, but instead as a necessary component of the negative concord construction. While I believe the syntactic use of *ne* in these cases is as the head of NEGP, the function of *ne* is quite different. In this respect, the use of the negative head in negative concord is similar to the inflectional heads of agreement and tense. *Ne* in these instances is 'negative agreement' (Frisch 1997, 33)

There is no quantitative evidence for such a distinction. The loss of *ne* is a unitary change operating in the context of some other negative marker. At the level on which the loss of *ne* operates, all instances of *ne* are the same, parallel as far as the change is concerned. All candidates for the loss of *ne* have negation marked on some other element in the clause. *ne* is therefore arguably redundant

¹⁰The texts by Chaucer under examination are the PPCME2 text samples of *Melibee* (CMCT-MELI), *The Parson's Tale* (CMCTPARS), the *Boethius* (CMBOETH), the *Treatise on the Astrolabe* (CMASTRO), and the *Equatorie of the Planets* (CMEQUATO).

as a morphological marker of negation, and like other agreement morphology is liable to phonological reduction, loss of salience and ultimate elimination from the grammar.

In order for the redundant licensing model to work, Frisch must exclude *ne* in negative doubling from his analysis. My analysis is not constrained in this way. The way I set up the changes within a Jespersen's Cycle with three independent stages allows the loss of *ne* to be extended to contexts with negative adverbs or negative NPs without impacting on the distribution of *not* in any way. This allows the loss of negative doubling to be integrated into the model of Jespersen's Cycle as a consequence of the transition from stage two to stage three of the cycle. This parallel implies some kind of equivalence between *ne...not* and negative doubling. However, it remains to be seen whether this descriptive parallel between *ne...not* and negative doubling has a formal syntactic correlate. I will address this issue in chapter 6, along with the issue of why contexts with negative adverbs or negative NPs resist *not*.

5.7.3 The distribution of *ne* in the *ne...but* construction

There is another context for *ne*, in which *ne* appears as an agreement marker, which I will address here. This is *ne* in the *ne...but* construction (which has the constructional meaning 'only'). The loss of *ne* should proceed in exactly the same way in this context as in negative contexts. Table 5.18 shows the frequency of *ne* in clauses involving *but*, where *but* is a particle with the exclusive meaning 'only' rather than a clause level conjunction (251-253).

(251) ...certes by nature ther nys but o God
 ...truly by nature there NEG-is but one God
 '...truly by nature there is only one God'
 (CMBOETH,433.C1.183)

(252) þer nis buten an godd þur hwam witerliche ha alle
 there NEG-is but one God through whom undoubtedly they all
 weren iwrahte...
 were made...
 (CMKATHE,22.56)

(253) And fro Bethleem unto Ierusalem nys but .ij. myle
 and from Bethlehem to Jerusalem NEG-is but two miles
 'And from Bethlehem to Jerusalem is only two miles'
 (CMMANDEV,47.1181)

Although there are fewer data in this context than in *ne...not* or negative doubling contexts, the time course of the loss of *ne* in *ne...but* is consistent with the time course of the loss of *ne* in negative doubling and *ne...not* contexts as shown in Table 5.18. The similarity of this context to the *ne...not* and negative doubling contexts adds further support to the hypothesis that the loss of *ne* is a single unitary change operating in the same way across all contexts.

Period	ne	Total but (<i>ne...but</i> and <i>but</i>)	% with ne
1150-1250	69	70	99%
1250-1350	64	68	94%
1350-1420	26	198	13%
1420-1500	4	205	2%

Table 5.18: The frequency of *ne* in the context of *but*

5.8 Summary and Conclusions

The diachronic data presented in this chapter support a view of the change from *ne* > *ne...not* > *not* as a three stage process, involving two changes ordered in time. I show that Frisch's (1997) redundant licensing model relies on some dubious assumptions, and fails to account for differences between clause types in the progress of Jespersen's Cycle. There are two changes, differentiated by the contextual factors which condition them: a change from *ne* > *ne...not* which is conditioned by clause typing factors, and a change from *ne...not* > *not* which operates uniformly in all contexts. The different properties of the two changes studied quantitatively over time allow the relationship between the three stages of Jespersen's Cycle to be readdressed in a way which is consistent with the progress and properties of change over time. Hence properties of the competition between negators inform a syntactic account of Jespersen's Cycle in a way which could not be achieved without examining change within the grammar competition model. The way that forms interact diachronically is crucial to the syntactic analysis.

In this case, what change reveals is that two types of *ne* must be distinguished: one which is unsupported, the other which is supported by *not*. These two types of *ne* are subject to different processes of change which can be distinguished by the way they are structured across contexts and across time. This empirical finding corresponds to the distinction between two forms of *ne* I made in chapter 4 on formal syntactic grounds, and adds empirical support to a Minimalist account

of early English negation which derives variation in negation strategies through variation in morphosyntactic features. Thus two forms of *ne* are available in Middle English, in direct structural competition: lexically valued *ne* [pol:neg] and lexically unvalued *ne* [pol:]. Competition between these forms derives the dependency between *ne* and *not* seen at stage two of Jespersen's Cycle. This distinction also allows for a simple statement of the conditions on the loss of *ne*, along the lines of 'eliminate the morpheme *ne* in those contexts where it is redundant at LF'. All *ne* [pol:] receiving a value during the syntactic computation will have their value stripped away by spellout and receive no interpretation at LF. This approach formalises the fact that the introduction of *not* is a prerequisite for the loss of *ne*. This approach receives empirical support in sentential negation contexts. However, clauses with negative arguments or adjuncts are problematic. The introduction of *not* is not a prerequisite for the loss of *ne* in these clauses. Use of *not* in these clauses remains marginal in Middle English, whilst the loss of *ne* in this context proceeds in exactly the same way as in other contexts in which *ne* is supported by another negative. *ne* is lost in all contexts in which negation can be morphologically identified on some other element. I have left aside the syntactic representation of clauses involving negative arguments or adjuncts for discussion in chapter 6. However, the parallels between the loss of *ne* in all contexts indicate that all contexts are formally equivalent in some sense which is relevant to the progress of the change.

This chapter demonstrates that an account of Jespersen's Cycle based on morphosyntactic features, for which I gave theoretical justification in chapter four, provides for a diachronic model of Jespersen's Cycle in which the introduction of *not* feeds the loss of *ne*. This relationship between the loss of *ne* and introduction of *not* receives empirical and quantitative support from the diachronic data. Unlike Frisch, I take the view that the three stages in Jespersen's Cycle each have independent syntactic reality and relevance to Jespersen's Cycle. My model requires a distinction between two types of *ne*, as the two types are affected by different processes of change. A Minimalist account, based on morphosyntactic features provides the required distinction.

Chapter 6

Multiple negation

6.1 Introduction

In previous chapters, I concentrated on the syntax of sentential negators, *ne* and *not*. This chapter will complete the picture with a discussion of the syntax of negative arguments and adjuncts. Old and Middle English are multiple negation languages. Here, I chart the availability of multiple negation and relate changes in the availability of multiple negation to Jespersen's Cycle. I argue that the properties of negative arguments and adjuncts themselves are crucial to the availability of multiple negation in English. This account exploits the approaches to multiple negation proposed by Ladusaw (1992), Deprez (1997) and Giannakidou (2000). I extend this account to deal with variation and change in the availability of multiple negation during the Middle English period. This chapter will develop some of the remarks concerning multiple negation which I made in chapter five into a more detailed syntactic account of this phenomenon in Early English, which integrates with the model of Jespersen's Cycle I proposed. I show that early English multiple negation is not tied to Jespersen's Cycle in the way Rowlett's (1998) proposals predict and present an alternative proposal.

There are two issues for the analysis of multiple negation. First, how is multiple negation licensed in a way which is semantically compositional, and consistent with Minimalist syntax, particularly the Principle of Full Interpretation. Syntactic and semantic approaches will be considered. Second, two approaches to concordant negative words are available in the literature. Ladusaw (1992), Deprez (1997) consider concordant negative words to be indefinites. Haegeman and Zanuttini (1996), Giannakidou (2000) consider concordant negative words to be

quantificational. I will consider their arguments in order to take a position on the status of early English concordant negative words. I propose an account in which the morphosyntactic feature specifications of negative words differs in multiple negation and double negation languages. This allows changes in the availability of multiple negation to be a matter of parametric variation in the Minimalist sense, and reduces multiple negation to a morphosyntactic feature checking dependency.

Multiple negation takes two forms in the history of English. These are the forms which van der Wouden (1994) distinguishes as NEGATIVE DOUBLING and NEGATIVE SPREAD. Negative doubling is the term given to the co-occurrence of a sentential negative like *ne* and one negative argument or negative adjunct. Negative spread is the term given to the co-occurrence of two or more negative arguments or adjuncts or a combination of negative arguments and adjuncts (254).

- (254) a. þan had He neuer no begynnynge
 then had He never no beginning
 'then He never had any beginning'
 (CMEDTHOR,46.717)
- b. no man seyð no-thyng a-gens hem
 no man said nothing against him
 'no man said anything against him'
 (CMKEMPE,33.730)

Middle English exhibits both patterns: negative doubling is most common in Early Middle English, whilst negative spread is most common in Late Middle English.

In chapter five, I showed that *not* tends not to co-occur with negative arguments or adjuncts. Frisch (1997) leaves aside multiple negation from his account, claiming that the change in sentential negation from *ne* to *not* does not happen in multiple negation contexts. We will see that the situation in my data is not so clear cut. There are clauses in which negative arguments or adjuncts appear in multiple negation with *not* (255) which are problematic to both Frisch (1997) and Rowlett (1998). The analysis must take account of these.

- (255) a. Þou shalt not bere no false wyttenes ægens no man by no way
 you ought not bear no false witness against no man in no way
 'You ought not bear false witness against any man in any way'
 (CMMIRK,103.2797)

- b. and he wolde not make no confessyon
 and he would not make no confession
 'and he would not make any confession'
 (CMGREGOR,233.2474)

6.2 The availability of multiple negation in early English

The aim of this section is to establish the patterns of negative co-occurrence which negative arguments can enter into in early English. There are two types of multiple negation in Old English prose: negative spread (256) and negative doubling (257) (van der Wouden 1994). These may occur in combination (258).

- (256) and næfre nænig leoð geleornade
 and never no song learned
 'and [he] never learnt any song'
 (cobede,Bede_4:25.342.19.3436)
- (257) Ic ne funde nanne gylt on him
 I NEG found no sin in him
 'I found no sin in him'
 (cowsgosp,Jn_[WSCp]:19.6.7261)
- (258) Ne mæg þonne nan man nahwar beon behydd
 NEG can then no man nowhere be hidden
 'Then no man can be hidden anywhere'
 (coaelhom,+AHom_11:391.1688)

It is generally assumed that Old and Middle English are both multiple negation languages. However, the situation is more complex and variable. There are two strategies by which negative doubling can be avoided:

First, the verb in a negative sentence is not always preceded by ...*ne*... Second, not all elements which can be negated by the addition of *ne* are so negated... But the strength of the tendency to negate adverbs and adjective/pronouns in prose sentences with adv[erb] *ne* prefixed to the verb must not be underestimated.
 (Mitchell 1985§1607)

This section quantifies the frequency of multiple negation and non-multiple negation of the two types using data from the York-Toronto-Helsinki Parsed Corpus of Old English Prose and the York-Helsinki Parsed Corpus of Old English Poetry. There is a marked difference in the frequency of multiple negation in the Old English prose and poetry. I examine the contexts or factors which affect the frequency of multiple negation in the two genres.

6.2.1 The frequency of multiple negation in the YCOE and the PPCME2

6.2.1.1 Negative doubling

The frequency of both negative doubling and negative spread is high in the Old English prose. Many of the exceptions, clauses which do not show multiple negation, may have constituent rather than sentential scope negation. Constituent scope negators do not co-occur with the sentential negator *ne* (259). It is difficult to factor instances of constituent negation out of the quantitative data completely. Obvious examples, such as those in contrastive or conjoined environments (259) have been removed from the figures.

- (259) a. þonne wat ic swiðe lytel oððe nanwiht
 then knew I very little or nothing
 'then I knew very little or nothing'
 (cosolilo,Solil_3:66.31.929)
- b. Alexander cwæð þæt he ondrede God and nænne oðerne on
 Alexander said that he feared God and no other on
 andwerdum life
 actual life
 'Alexander said that he feared God and no other in this life'
 (cocathom2,+ACHom_II,_20:176.79.3898)

The results in Table 6.1 show a high frequency of negative doubling with *ne*, although there is some variation between texts.

Table 6.1 shows that most negative phrases co-occur with *ne* in all periods. However, the data do not pattern uniformly across all texts. The frequency of *ne* is lower in 850-950 than the other periods. Examining the figures for individual

¹The second conjuncts include clauses introduced by the negative conjunction *ne* 'nor' as well as non-negative conjunctions such as *and*, *or*.

Period	Main clauses			Second conjuncts ¹			Subordinate clauses		
	ne	Total	% ne	ne	Total	% ne	ne	Total	% ne
850-950	391	444	88%	167	220	76%	546	656	83%
950-1050	1012	1084	93%	840	890	94%	1056	1125	94%
1050-1150	363	390	93%	243	273	89%	496	567	87%
TOTAL	1766	1918	92%	1250	1383	90%	2098	2348	90%

Table 6.1: The occurrence of *ne* in negative doubling by period and clause type

texts, this difference in 850-950 is caused by particularly low frequencies of *ne* in all clause types in the Old English *Bede*. Table 6.2 shows the frequency of negative doubling with *ne* in the *Bede* and the remainder of the 850-950 texts, excluding the OE *Bede*.

Text	Main clauses			Second conjuncts			Subordinate clauses		
	ne	Total	% ne	ne	Total	% ne	ne	Total	% ne
OE <i>Bede</i>	11	47	23%	8	56	14%	17	101	17%
Other 850-950	380	397	96%	159	164	97%	529	555	95%
Total 850-950	391	444	88%	167	220	76%	546	656	83%

Table 6.2: The occurrence of *ne* in negative doubling in 850-950 by text

There are two possible reasons for the anomalous behaviour of the Old English *Bede*. The Old English text is a translation from Latin. The lower frequency of *ne* in negative doubling may result from translation practices. However, many other texts of the same period such as the OE *Boethius* and the *Cura Pastoralis* are also direct translations from Latin sources. These do not show the same pattern. The second option is that the OE *Bede* represents a different grammar of negation which has less *ne* in this context. Levin (1958) argues that the Old English *Bede* has orthographic and morphological features typical of the Anglian rather than West Saxon dialect. The frequency of negative doubling may differ according to dialect. Unfortunately, there are too few Anglian texts in the York-Toronto-Helsinki Parsed Corpus of Old English Prose to investigate this idea fully.

In the period 950-1050, the frequency of negative doubling with *ne* is higher in texts by Ælfric than other texts in both clause types (Table 6.3). This is a particularly important factor on the overall distribution of negative doubling in the period 950-1050 as texts by Ælfric provide 1918/3099 (62%) of the relevant clauses in this period.

Once Ælfric's usage is excluded, there appears to be continuity between 950 and 1150. With *Bede* excluded from the earlier period 850-950, the figures for

Text	Main clauses			Second conjuncts			Subordinate clauses		
	ne	Total	% ne	ne	Total	% ne	ne	Total	% ne
Aelfric	663	697	95%	547	556	98%	657	665	99%
Other 950-1050	349	387	90%	293	334	88%	399	460	87%
Total 950-1050	1012	1084	93%	840	890	94%	1056	1125	94%

Table 6.3: The occurrence of *ne* in negative doubling in 950-1050 by text

this period show a large degree of continuity with those for later periods. Whilst there is some variation between particular texts, the overall frequency of *ne* in the Old English prose is largely consistent, once the anomalous texts are taken into account.²

Turning to the Middle English prose data shows a steadily decreasing frequency of *ne* in all contexts where it occurs. Table 6.4 is a recapitulation of figures from chapter 5.

Period	negative NP			never		
	ne	Total	% ne	ne	Total	% ne
1150-1250	493	520	95%	264	286	92%
1250-1350	168	189	89%	15	16	94%
1350-1420	111	1022	11%	25	274	9%
1420-1500	12	1018	1%	3	374	1%

Table 6.4: The overall distribution of *ne* in negative doubling by date.

The loss of *ne* results in a substantial decline in the frequency of multiple negation in Late Middle English. However, the loss of *ne* does not lead to the loss of multiple negation at this period. Examples of negative spread continue to occur through into the Early Modern English period (Nevalainen 1996). Instances of multiple negation involving *not* (255) are also attested. Table 6.5 shows the frequency of negative doubling involving *not* in the context of a negative NP. The co-occurrence of negative NPs and *not* is not frequent, comprising less than 3% of all clauses with negative NPs. The co-occurrence of negative adjuncts, most commonly PPs with negative objects, and *not* is more frequent, amounting to 30% of clauses with negative adjuncts in the period 1420-1500.

²Note also that the figures for clauses without *ne* may include some constituent scope negations, which are difficult to isolate from sentential scope negations.

Period	negative NP			PP+negative NP		
	not	Total	% w. not	not	Total	% w. not
1350-1420	31	1022	3%	36	147	24%
1420-1500	21	1018	2%	49	165	30%
Total	52	2040	2.5%	85	312	27%

Table 6.5: The frequency of *not* co-occurring with a negative NP or a PP+negative NP.

6.2.1.2 The use of non-assertive *any*-forms

Quantification of the use of non-assertive negative polarity items, which is a second strategy for avoiding negative doubling, again shows that multiple negation is predominant in Old English prose. The non-assertive negative polarity items *ænig*, *æfre* 'any, ever' are generally avoided in negative contexts (Table 6.6), although there are some examples (260).

- (260) a. Ne was æfre ænig cyninga ne aldormanna, þætte ma heora
 NEG was ever any king or nobleman that more his
 londa utamærde & him to gewælde underþeodde
 land-GEN depopulated and himself to control subjected
 'There was never any king or nobleman that...'
 (cobede, Bede_1:18.92.7.840)
- b. Ne cymð he æfre to Godes rice gif...
 NEG comes he ever to God's kingdom if...
 'He will never come to God's kingdom if...'
 (cowulf, WHom_7:159.500)
- c. Ne habbaþ we ænigne cyning butan Casere
 NEG have we any king but Cæsar
 'Ne do not have any king except Cæsar'
 (coverhom, HomS_24_[ScraggVerc_1]:197.208)

Table 6.6 shows the frequency of the non-assertive forms in (260), in comparison to the frequency of negative doubling in the same contexts. The totals include all potential contexts for negative doubling, so the table shows the frequency with which negative doubling is avoided by use of *ænig*/*æfre* forms rather than the corresponding negative forms. All clauses included in Table 6.6 have the sentential negator *ne*, so are potential negative doubling contexts. The comparison is between the forms in (261a) and (261b). Both are included in the 'Total' column, and the frequency of (261b) is shown in Table 6.6.

- (261) a. *ne ... nænig/næfre ...*
 b. *ne ... ænig/æfre ...*

Examples of *ænig*, *æfre* in clauses with other negatives, such as negative phrases and negative conjunctions will be considered separately below. The column labelled 'any' (=contexts where negative doubling is potentially available but avoided by use of *ænig*, *æfre* forms) includes both instances of *ænig* and *æfre* in the construction (261b).

Period	Main clauses			Second conjuncts ³			Subordinate clauses		
	any	Total	%	any	Total	%	any	Total	%
850-950	8	399	2%	3	170	2%	3	549	1%
950-1050	32	1044	3%	27	867	3%	34	1090	3%
1050-1150	27	390	7%	41	284	14%	66	562	12%
1050-1150 Wulfstan	18	35	51%	33	57	58%	56	91	62%
w/o Wulfstan	9	355	3%	8	227	4%	10	471	2%
TOTAL	67	1883	4%	71	1321	5%	103	2201	5%

Table 6.6: The frequency of *ænig*, *æfre* in all clauses with *ne*

The overall figures hide a wide range of variation between texts, particularly in 1050-1150. Figures for texts by Wulfstan (*Wulfstan's Homilies* and *Wulfstan's Canons of Edgar*) have been separated out of the total for the period 1050-1150 on account of Wulfstan's markedly different use of non-assertive *ænig*, *æfre* forms in negative clauses. Considering all clause types, there are 151 potential negative doubling contexts in Wulfstan's *Homilies*, of which 78/151 (52%) have *ænig/æfre* rather than negative doubling. Wulfstan's *Canons of Edgar* have 29/32 (91%) *ænig/æfre* in these contexts. Table 6.6 shows continuity between 950 and 1150, once texts by the anomalous Wulfstan are excluded.

The Old English *Bede* also shows a high frequency of NPI forms. Across all clauses, 11/47 (23%) of potential negative doubling contexts have NPIs rather than negative doubling. In the case of the Old English *Bede*, the lower frequency of negative doubling might reflect its putative Anglian origins. Whether the same explanation can be extended to the works of *Wulfstan* is less clear.

The PPCME2 data show even fewer examples of non-assertive NPIs *any*, *ever* in negative clauses than the Old English prose data. I separate negative doubling

³Here, as previously, second conjuncts introduced by the negative conjunction *ne* 'nor', as well as non-negative conjunctions such as *and*, *or* are included.

contexts and negative spread contexts. There are 6 examples of *any* in Late Middle English like (262) which are potential negative spread contexts, and 8 like (263)⁴ which are potential negative doubling contexts. There are no examples of *any* in EME clauses. The first examples are found in texts by Wycliffe (late 14th century).

(262) for no man doith ony thing in hiddlis
 for no man does any thing in secret
 'for no man does anything in secret'
 (CMNTEST,VII,1.585)

(263) þat God may not iuge folily ony man
 that God may not judge erroneously any man
 'that God may not judge any man erroneously'
 (CMWYCSE,I,237.255)

Table 6.7 shows the frequency of *any-* in two potential negative doubling contexts with *not*. The first are contexts in which negative doubling with a negative NP may be used. The second are contexts in which negative doubling with a PP adjunct plus negative object may be used. The frequency of *any-* in these two contexts equals to the frequency with which negative doubling is avoided. The frequency with which non-assertive *any-* forms are used instead of negative doubling is higher in Middle English than in Old English. In Late Middle English, *any-* forms are used in around 10% of these potential negative doubling contexts (Table 6.7) compared with only 241/5405 or 4.5% in the YCOE (OE figures based on Table 6.6).

Period	not...neg/anyNP			not...neg/anyPP		
	anyNP	Total	% any	anyPP	Total	% any
1350-1420	6	37	16%	5	41	12%
1420-1500	2	23	9%	6	55	11%
Total	8	60	13%	11	96	11%

Table 6.7: The frequency of non-assertive *any* in potential negative doubling contexts with *not*.

The data presented here demonstrate that negative doubling is predominant throughout the Old and Early Middle English prose, although it is not categorical. We have also seen that the loss of *ne* does not mean the end of negative doubling. There are some examples of negative doubling with *not*.

⁴These examples appear most commonly in works by Wycliffe, including the Wycliffite Sermons and Bible translations.

Negative spread, in which negative arguments and/or adjuncts co-occur in the absence of a sentential negator is also variable. The number of LME clauses with negative spread between two negative NPs is quite small (n=9). Non-assertive *any* (n=4) accounts for 4/13 or 31% of contexts where negative spread could hold between two NPs. These figures are small, but suggest that Middle English negative spread is not as categorical as has been supposed, even though there are insufficient data here to consider a full range of texts and dialects which may behave differently in respect of multiple negation.

6.2.2 The Old English poetry data

Mitchell (1985, §1629) notes the findings of Klaeber and Knork concerning multiple negation in the OE poetry. The poetry differs from the prose in two respects:

1. In the majority of sentences in *Beowulf* in which *ne* precedes the finite verb it is the only negative.
2. There are many more sentences [involving a negative argument or adverbial PWW] without *ne* prefixed to the finite verb in the poetry than in the prose.

(Mitchell 1985§1629)

These are the same two strategies for marking sentential negation without employing negative doubling that I have already looked at in the Old and Middle English prose: omission of *ne* and use of NPIs in negative contexts. In both respects, the frequency of negative doubling is lower in the poetry than in the prose.

6.2.2.1 Negative doubling

Table 6.8 shows the frequency of *ne* in negative doubling with a negative phrase is much lower in the poetry than the prose (cf. (264-266)). The only exception is the *Metrical Boethius* in which the frequency of negative doubling is comparable with prose (265, 266).

- (264) Nanig siððan wæs weorð on weorulde
 Nothing afterwards was honourable in world
 'afterwards, nothing was honourable in the world'
 (cometboe,162.8.36.90)

- (265) nat nænig mon hwær hi nu sindon.
 NEG-knows no man where they now are
 'No man knows where they are now'
 (cometboe,166.10.52.164)
- (266) þonne næfde he nane scylde
 Then NEG-had he no shield
 'Then he had no shield'
 (cometboe,192.25.67.427)

There are only four poetic texts with sufficient data to make any comparison with prose: *Beowulf*, *Cynewulf*, *The Exeter Book* and the *Metrical Boethius*. There are also insufficient data to separate second conjuncts from other main clauses. Both are included in the category of 'main clauses' in Table 6.8. Subordinate clauses are considered separately.

Text	Main clauses			Subordinate clauses		
	with ne	Total	% ne	with ne	Total	% ne
coandrea	0	5	–	2	3	66%
cobeowul	4	68	6%	4	8	50%
cobrunan	1	1	100%	–	–	–
cochrist	1	4	25%	0	1	–
cocynew	2	19	11%	0	3	–
codream	1	1	100%	–	–	–
coexeter	4	10	40%	1	5	20%
coexodus	0	1	–	–	–	–
cogenesi	0	3	–	–	–	–
cometboe	16	20	80%	4	7	57%
conorthu	0	1	–	–	–	–
cophoeni	0	5	–	1	4	25%
coriddle	1	8	13%	0	1	–
TOTAL	30	146	21%	12	32	38%

Table 6.8: The occurrence of *ne* in negative doubling in the York-Helsinki Parsed Corpus of Old English Poetry by text.

Table 6.8 presents the frequency of negative doubling in the poetry. All clauses in the 'Total' column have a negative XP (argument or adjunct). Table 6.8 shows how many of these negative XPs appear in negative doubling with the sentential negator *ne*.

Table 6.8 shows that the frequency of negative doubling with *ne* in the poetry is lower than the prose. In most poetic texts, negative XPs are sufficient to

negate a clause on their own, without the negative marker *ne*. One exception is the *Metrical Boethius*. Fulk (1992) describes the *Metrical Boethius* as a late text, and localises it to the West Saxon dialect. The other large poems, *Beowulf* and *Cynewulf* are early texts, believed to be composed in the 8th century or earlier, although the manuscript versions we have date from later in the OE period. Fulk (1992) localises these texts to the Anglian dialect, on the basis of orthographic and morphological features. Date and dialect may be relevant factors in the use of negative doubling. In addition, it is important to take note of the poetic conventions and how these might differ in the early and late poetry. The behaviour of the *Metrical Boethius* indicates that multiple negation is not exclusive to prose, but the poetic conventions used in this text may differ from those used in earlier texts. The use of *ne* differs in prose and poetry in line with the observations made in Mitchell (1985). However, as well as a difference between the two corpora, there are differences between texts within the corpora.

6.2.2.2 The use of non-assertive *any* forms

Turning to the second strategy for avoiding negative doubling, the frequency of non-assertive *ænig/æfre* in potential negative doubling contexts is much higher in the poetry than in the majority of the prose, with the exception of prose works by Wulfstan. This is shown in Table 6.9.

Text	Main clauses			Subordinate clauses		
	ne..any	Total	%	ne..any	Total	%
coandrea	0	0	–	4	6	67%
cobeowul	11	15	73%	5	9	56%
cobrunan	1	2	50%	0	0	–
cochrist	9	10	90%	3	3	100%
cocynew	8	10	80%	2	2	100%
codream	2	3	67%	0	0	–
coexeter	3	7	43%	0	1	0%
coexodus	0	0	–	1	1	100%
cogenesi	3	3	100%	0	0	–
cokentis	1	1	100%	0	0	–
cometboe	11	27	41%	8	12	67%
cophoeni	6	6	100%	2	3	67%
coriddle	7	8	88%	2	2	100%
TOTAL	62	92	67%	27	39	69%

Table 6.9: The distribution of *any* in clauses with *ne* versus multiple negation with *ne* in the OE poetry corpus

Mitchell (1985§1629) speculates that the demands of alliteration may affect the distribution of multiple negation in the poetry. He hypothesises that the use of *ænig* and *æfre* facilitates alliteration. A word with an initial vowel can alliterate with a word with any other initial vowel. Words with initial *n-* can only alliterate with words with an initial *n-*. Thus the range of possible alliteration is much greater with *ænig* and *æfre*, and the need for alliteration in the early poetry may be a factor in their more frequent use. However, Mitchell (1985) is ambivalent about the value of this hypothesis. He discusses several cases where alliteration may play a role in the choice of *ænig*, *æfre* over *nænig*, *næfre*, but also observes instances of *ænig* and *æfre* which do not alliterate. He concludes:

... that the fact that multiple negation was less common in the poetry than in the prose is due partly, but not entirely, to the demands of alliteration...

(Mitchell 1985, , §1613)

Table 6.10 compares the frequency of negative doubling (265-266) with the frequency of *ne...any/ever* (267-270). It includes all potential negative doubling contexts in main and subordinate clauses, and divides the data according to whether *ænig/æfre* or the negative equivalent *nænig/næfre* alliterates with an element in its companion half-line. *Ænig* and *æfre* are most frequent in alliterating contexts (267-270), whilst *ænig*, *æfre* and *nænig*, *næfre* occur in roughly equal measure in other contexts (271-273), where other syllables alliterate. In these examples, '/' represents a half-line break. '/' represents a line break. The alliterating elements under examination are italicised.

(267) *Nolde eorla hleo / ænige þinga // þone cwealmcuman /*
 NEG-wished earl's protector / any thing // the death-bringer /
cwicne forlætan, //
 alive release //
 'The protector of earls did not wish in any way to release the bringer of death alive'

(cobeowul,26.791.678)

(268) *ne meahte horde neah // unbyrnende / ænige hwile // deop*
 NEG could hoard near // without burning / any time // deep
gedygan / for draacan lege. //
 endure / for dragon's fire //

'he could not endure the depths near the hoard for any length of time
because of the dragon's fire'

(cobeowul,79.2546.2081)

- (269) Hio him *ondsware* / *ænige* ne mehton // agifan togenes /
They him answer / any NEG could // give in reply /

'They could not give him any answer in reply'

(cocynew:ELENE,70.166.259)

- (270) Ne þearf ic *ænigre* / *are* wenan // on woruldrice, /
NEG need I any / glory hope // in earth's kingdom /

'I need not hope for any glory on earth'

(cogenesi,33.1022.263)

- (271) Næbbe ic synne wið hie, // *facna* *ænig* / *gefremed* gena. //
NEG-have I sin with them, // crimes any / committed now' //

'I have committed no sin, nor any crimes with them now'

(cogenesi,79.2651.643)

- (272) Næs þæt yðe ceap // to *gegangenne* / *gumena* *ænigum*.
NEG-was that easy bargain / to obtain // man-DAT any

'That was not an easy bargain to obtain for any man'

(cobeowul,75.2415.1968)

- (273) þæt þu þinne *mægðhad* / *meotude* brohtes, // *sealdes* butan
that you your chastity / God offered // gift without
synnum. / Nan *swylc* ne *cwom* // *ænig oðer* / ofer *ealle* men,
sin. / No such NEG satisfied // any other / of all men

'that you offered your chastity to God, a gift without sin. No such a one
satisfied any other man'

(cochrist:CHRIST_I,11.290.197)

The distribution in Table 6.10 indicates that alliterating contexts highly favour the use of *ænig*, *æfre*, but alliteration does not entirely account for the higher frequency of these forms in poetry than in prose. Table 6.10 supports Mitchell (1985, §1613). There are two differences between poetry and prose which could potentially account for the different frequencies of negative doubling: dialect and date. Fulk (1992) localises most of the poetry to the Anglian dialect, and dates much of it earlier than the extant OE prose. There is one notable exception in the York-Helsinki Parsed Corpus of Old English Poetry: the *Meters of Boethius*, which is described as 9th or 10th century West Saxon. This is the text with the highest

Text	Alliterating contexts			Non-alliterating contexts		
	ne..any	Total	%	ne..any	Total	%
coandrea	4	4	–	0	2	0%
cobeowul	10	10	100%	6	9	67%
cobrunan	1	1	100%	0	1	0%
cochrist	10	10	100%	2	3	67%
cocynew	10	10	100%	0	1	0%
codream	2	0	100%	0	1	0%
coexeter	2	2	100%	1	3	33%
coexodus	1	1	100%	0	0	–
cogenesi	2	2	100%	1	1	100%
cokentis	1	1	100%	0	0	–
cometboe	16	21	76%	3	15	20%
cophoeni	6	6	100%	2	5	40%
coriddle	7	8	88%	2	2	100%
TOTAL	72	78	92%	17	43	40%

Table 6.10: The distribution of *any* in clauses with *ne* versus multiple negation with *ne* in the York-Helsinki Parsed Corpus of Old English Poetry. Alliterating and non-alliterating contexts. All clause types.

frequency of negative doubling, on both measures I have investigated.⁵

The frequency of multiple negation is typically much lower in the poetry than in the prose. However, there are exceptional texts which indicate that a split on the basis of genre might not be appropriate. Furthermore, the requirement of alliteration alone does not account for the lower frequency of multiple negation in the poetry. Comparison with the OE prose data shows a situation which is not entirely uniform: the OE *Bede* is anomalous on both measures of negative doubling, and texts by Wulfstan have an abnormally high frequency of *ænig*, *æfre*. Both these texts are said to have features of the Anglian dialect. The data from these texts might support the view that there is a dialect split in the patterns of negative doubling, but this must remain speculative in the absence of sufficient unambiguous data.

There are two groups of texts in Old English with respect to multiple negation. It will be the purpose of subsequent sections to provide a syntactic characterisation of both groups. The evidence from Old English is problematic for the analysis of multiple negation proposed by Rowlett (1998). Rowlett (1998) pro-

⁵Turning to negative spread, there are no examples of negative spread in the York-Helsinki Parsed Corpus of Old English Poetry data. There are 8 examples of clauses containing a negative phrase plus *ænig*, *æfre*.

poses to link the availability of multiple negation to the position of a language on Jespersen's Cycle. The variation in multiple negation in early English prose and poetry is not directly linked to Jespersen's Cycle: clauses with the negative head *ne* exhibit variability in multiple negation, as do Late Middle English clauses without *ne*. So, how does multiple negation relate to Jespersen's Cycle? In section 6.3.3, I will discuss Rowlett's proposed link between multiple negation and Jespersen's Cycle in detail, outlining some of the problems with his account, and considering some alternatives. Before discussing Rowlett (1998), however, the next section will outline the two major approaches to multiple negation within the Principles and Parameters framework.

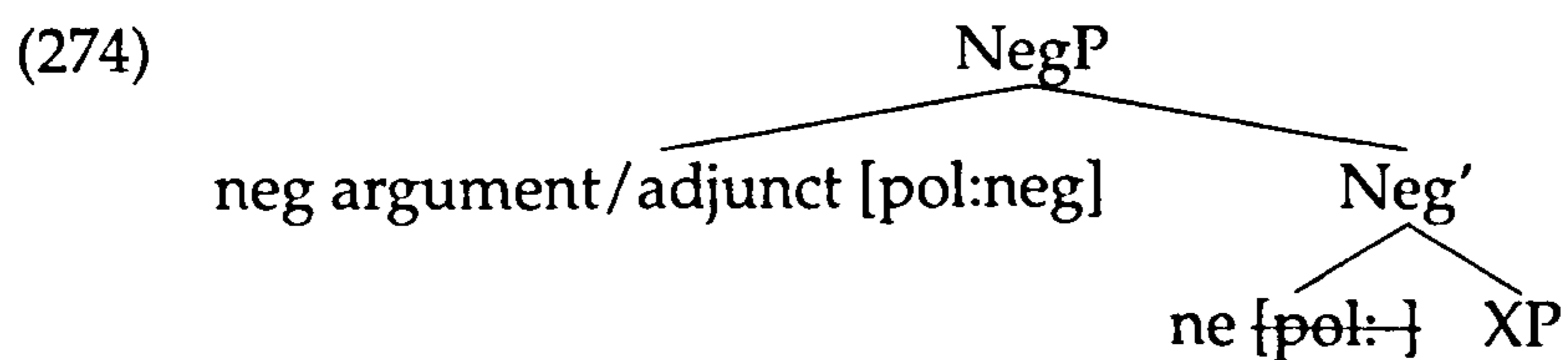
6.3 Syntactic analyses of multiple negation

Several syntactic accounts of multiple negation have been proposed in the literature (Haegeman and Zanuttini 1996, Ladusaw 1992, Deprez 1997, Giannakidou 2000, Brown 1999). These analyses fall into two groups. First, those in which concordant negatives bear semantically interpretable negative features, and under which multiple negation arises from particular syntactic configurations (Haegeman and Zanuttini 1996, Rowlett 1998). Second, those in which concordant negatives do not bear semantically interpretable negative features but are licensed within the scope of negation, like PDE negative polarity items (Ladusaw 1992; 1993, Deprez 1997, Giannakidou 2000). Early English multiple negation provides a new perspective from which to evaluate these two approaches: how well they accommodate the observed variation and change in multiple negation.

6.3.1 The Neg-criterion and negative absorption

Haegeman and Zanuttini (1996) propose to account for negative doubling under the Neg-criterion (see section 1.3.3). For them, the relationship between a negative adjunct or argument is the same spec-head relation which holds between the negators in the bipartite *ne...not* form. However, negative doubling between *ne* and negative arguments or adjuncts does not always result in negative adjuncts or negative arguments occupying the same surface position as secondary negators. In order to account for this fact, the Neg-criterion may apply at LF. The Neg-criterion approach makes parallel the structural analysis of *ne...not* and negative doubling.

This parallel is reflected in the diachronic behaviour of the two phenomena in the Middle English period at the point when both *ne* is lost simultaneously from bipartite *ne...not* negation and from negative doubling (see section 5.7.2). The featural account of spec-head agreement between negatives which I proposed in chapter four to account for bipartite *ne...not* could be extended to account for negative doubling (274). This approach gains syntactic unity between all bipartite forms of negation. Furthermore, there is some evidence that negative arguments may move, to a position which van der Wurff (1999a), Ingham (2000) argue is spec,NegP, thus forming at spellout the spec-head configuration required for feature checking. Under this approach *ne* in negative doubling and in bipartite *ne...not* is a morphological agreement marker with no LF interpretation. This is similar in spirit to van der Wouden's (1994) proposal that the semantic function of the negative marker in negative doubling is one of the identity function. This account extends the proposal of chapter 4 that there are two types of *ne*, and that *ne* is only eliminated at PF when it has no interpretable features.



This account cannot be correct as it stands, however. It relies on a one to one specifier head relation to satisfy the Neg-criterion or value the unvalued [pol:] feature on the negative head. The account ignores the co-occurrence of negative arguments and/or negative adjuncts. Negative arguments and adjuncts can co-occur with each other in clauses with and without the negative head *ne*. In order for negative spread to be licensed, the Neg-criterion, or its feature checking equivalent, must hold between all the concordant negative phrases and the negative head. The Neg-criterion is insufficient on its own to account for negative spread. The feature checking proposal I make in chapters four and five establishes a one to one syntactic dependency between the unvalued features of a head and matching valued features of its specifier. Multiple movement to spec,NegP is unmotivated for feature checking reasons. Even if multiple specifiers of NegP were licit, we need some mechanism to convert several instances of the feature [pol:neg] on the multiple specifiers into a single instance of that feature, in order to derive a multiple negation reading rather than a logical double negation reading.

There are two approaches to dealing with this problem proposed in the literature: the licensing approaches (Ladusaw 1992, Deprez 1997, Giannakidou 2000) which treat concordant negative words as negative polarity items without negative features, and the negative factorisation or absorption approach (Haegeman and Zanuttini 1996) which takes all negative XPs to be interpretable as negative at LF. The latter approach faces the problem of semantic non-compositionality. Under this approach, multiple negation readings arise through a particular syntactic configuration. All negative arguments and adjuncts are subject to the Neg-criterion, moving to spec,NegP at LF in which position all negative arguments and adjuncts form a complex specifier, and the negative force of the individual component negative phrases is factored out. Absorption is a non-compositional approach to multiple negation under which not every LF interpretable negative feature introduced into the syntax survives to be interpreted at LF. Absorption or factorisation eliminates features on certain lexical items which are interpretable at LF. Chomsky (1995, 27) bars such operations by the Principle of Full Interpretation.

From a language change perspective, Neg-absorption raises further problems. Haegeman and Zanuttini (1996) characterise negative absorption as a principle of interpretation at LF. Languages with and without multiple negation differ in the application of this principle, for reasons which are not made clear. Haegeman and Zanuttini (1996) hypothesise that multiple negation languages have spec-head agreement within the functional projection NegP, whilst double negation languages lack NegP. The Agreement in NegP (the Neg-criterion) is then parametrised to only apply in certain languages where there is morphological or syntactic evidence for it. The difference between double negation and multiple negation languages follows if negative absorption is made contingent on agreement within NegP. However, it is not clear how this follows from Haegeman & Zanuttini's (1996) account, or how negative absorption should be parameterised. Haegeman and Zanuttini (1996) consider the possibility that negative absorption is parameterised to apply only when a negative word has [neg] features on its head. In section 6.5.1, I propose an alternative account of multiple negation as feature checking in which the availability of multiple negation is determined by the morphosyntactic features of negative words.

Multiple negation is lost in the history of Standard English. The potential for negative absorption within the language must change. However, it seems contrary to Principles and Parameters approaches to claim that the mechanisms of

semantic interpretation change during the history of a language. Under Chomsky's recent Minimalist proposals, LF interpretative processes are part of the computational component and should remain invariant. Finally, the development of LME negative doubling with *spec,NegP not* is not predicted by this approach. In a system under which either negative phrases or *spec,NegP not* mark sentential negation at LF, there is no syntactic motivation to introduce *spec,NegP not* into clauses which have negative phrases as both have LF interpretable [pol:neg] features. Therefore, the two should be in complementary distribution. Where *not* co-occurs with other phrasal negatives, double negation should result. This is not the case.

In light of the problems posed by the process of negative absorption, I will not pursue this approach further here. In a Minimalist framework, the problem becomes how to account for multiple negation whilst maintaining semantic compositionality, and accommodating parametric variation and change in the availability of multiple negation. Compositionality enforces the conclusion that only one of the negatives in any clause with multiple negation can actually bear a negative interpretation at LF. Haegeman (1995, 185) proposes that the Neg-criterion holds between a negative head and a null *spec,NegP* operator which licenses negative adjuncts and arguments within its scope by binding. The operator receives a negative interpretation at LF, and satisfies the Neg-criterion. The implication is that the negative words bound by this operator do not themselves contribute a negative interpretation at LF. They are interpreted with reference to the operator which binds them. In order for this approach to work, the only interpretable negative element must be the null operator. The negative arguments and adjuncts must be negative in morphology only, and subject to licensing conditions on their distribution. Two questions follow. First, how to characterise the licensed elements both semantically and syntactically. Second, how to define appropriate syntactic or semantic licensing conditions.

6.3.2 Concordant negatives as negative polarity items (NPIs)

Ladusaw (1992) discusses the problems which multiple negation poses for semantic compositionality. He proposes that negative words are ambiguous between negative quantifier and negative polarity item (NPI) interpretations. They are negative quantifiers in logical double negation languages, and NPIs in multiple negation languages. Ladusaw (1992) proposes that the negation which is

interpreted by the semantics in multiple negation languages is in fact an abstract category rather than a morphologically realised one. The abstract category is able to be abstract precisely because of the NPIs which it licenses. Further work on the hypothesis of concordant negatives as NPIs has moved to a more morphologically concrete position. Both Deprez (1997) and Giannakidou (2000) argue that the licensor of negation in a multiple negation clause is the negative marker, and it is this which is semantically interpreted at LF. They maintain Ladusaw's idea that concordant negatives are NPIs licensed by the negative marker. Where Deprez (1997) and Giannakidou (2000) differ is in their analysis of the nature of the concordant negatives. Deprez (1997) argues that concordant negatives are indefinites, subject to the same licensing conditions as NPIs such as English *any*-forms at spellout. Giannakidou (2000) argues that concordant negatives, whilst being NPIs are not indefinites but quantifiers. She argues that concordant negatives have the distribution of quantifiers, being subject to strict locality, syntactic island constraints, and undergoing quantifier raising. Section 6.4.3 will apply arguments from this literature to show that the distribution of concordant negatives in Middle English is more highly constrained than the distribution of NPIs.

The problem with these approaches to multiple negation as NPI licensing is that they do not discuss negative spread in detail. However, I propose that variation between negative quantifier and NPI interpretations of negative words in Middle English derives the observed patterns of multiple negation, and can also explain the eventual loss of multiple negation in Early Modern English. In section 6.4.1 I will apply the NPI licensing approach to multiple negation in the history of English, paying particular attention to the relationship between Jespersen's Cycle and multiple negation. I will discuss Rowlett (1998) in detail, and show that a model which takes concordant negatives to be negative polarity items (NPIs) lends itself to the observed variation and change in multiple negation in English. The diachronic transience of negative spread in English will be accounted for under this model. Negative spread emerges only when *ne* is lost, then is only productive for around 250-300 years, during which time its use is variable and declining (see Nevalainen (1996)).

6.3.3 Multiple negation and Jespersen's Cycle: Rowlett (1998)

Rowlett (1998) connects the availability of multiple negation and the position of a language with regard to Jespersen's Cycle, developing an observation made by

Jespersen (1924).

There is one very important observation to be made, without which I do not think we shall be able to understand the matter, namely that repeated negation [multiple negation] becomes an habitual phenomenon in those languages only in which the ordinary negative element is comparatively small in phonetic bulk... If this repetition is rarer in modern English and German than it was formerly, one of the reasons probably is that the fuller negative *not* and *nicht* have taken the place of the smaller *ne* and *en*.

(Jespersen 1924, 333)

Rowlett formulates this syntactically as Jespersen's Generalisation (275).

(275) **Jespersen's Generalisation**

A language is an NC [negative concord, or multiple negation] language iff the regular marker of pure sentential negation is not associated with spec,NegP.

(Rowlett 1998, 87, ex.2)

Jespersen's Generalisation makes predictions about the availability of multiple negation, not only in particular clauses, but in a language as a whole. As *not* gains ground as a sentential negator in the Middle English period, multiple negation should be lost in parallel with the introduction of *not* under Jespersen's Cycle. Jespersen's Generalisation predicts that multiple negation should only occur in Old and Early Middle English when the sentential negative marker is unsupported *ne*. The loss of the negative head *ne* leads to a sharp decrease in negative doubling in Late Middle English. However, it does not lead to the outright loss of negative doubling. Some examples appear with *ne...not* or *not*. If *not* is a sentential negator in these examples, they are counter-examples to Jespersen's Generalisation.⁶

⁶Haegeman & Zanuttini's (1996) proposals relate multiple negation and Jespersen's Cycle differently. For them, multiple negation declines with the loss of the negative head in the transition from stage two to stage three of Jespersen's Cycle, rather than with the introduction of *not* at stage two. Negative doubling with *not* and negative spread in Middle English are problematic for this analysis too, as these forms of multiple negation do not involve a morphologically overt negative head. For ME to be consistent with this analysis, a null negative head is required.

Second, negative spread must be considered. This refers to the co-occurrence of two negative arguments and/or adjuncts. Late Middle English marks sentential negation using *not*, yet in clauses with the relevant indefinites which are potential contexts for negative spread, negative spread is the norm in LME.

Negative spread is the norm irrespective of the presence (276) or absence (277) of the negative head *ne*. If there is any connection between the introduction of *not* and the loss of negative spread, it must be indirect.

- (276) a. nan mann næfð swapeah nane mihte þurh hine sylfne
 no man NEG-has however no strength through him self
 'however, no man has any strength of himself'
 (coaelhom,+AHom_22:672.3699)
- b. Ne deð nan man nan þing on diglum
 NEG does no man no thing in secret
 'No man does anything in secret'
 (cowsgosp,Jn_[WsCp]:7.4.6259)
- c. nan cristen man ne sceal þæt gelyfan
 no Christian man NEG ought that believe
 'no Christian man ought believe that'
 (cocathom1,+ACHom_I,_20:340.145.3982)
- (277) a. For or now, I found never no knyght that matched me
 For before now, I found never no knight who matched me
 'for before now, I never found any knight who matched me.'
 (CMMALORY,68.2331)
- b. 3e had neuyr no knowlach of me be-fore þis time
 you had never no knowledge of me before this time'
 'You never had any knowledge of me before this time.'
 (CMKEMPE,58.1293)
- c. no man seyð no-tyng a-geyns hem
 no man said nothing against him
 'no man said anything against him'
 (CMKEMPE,33.730)

This situation runs counter to Jespersen's Generalisation. Middle English is a language with a spec,NegP sentential negator *not*, yet this sentential negator co-occurs with a productive system of multiple negation. One solution is to relate Jespersen's Generalisation to subsets of clauses such that there are two grammars in competition which realise both options under Jespersen's Generalisation.

We might expect competition between these two grammars to derive Jespersen's Cycle and the loss of multiple negation simultaneously. Multiple negation will be lost as the grammar with sentential negator *not* gradually takes over. However, the persistence of multiple negation into Early Modern English, when *not* is firmly established as a sentential negator is anomalous, as is the use of *not* in multiple negation. The time lag between the introduction of *not* as a sentential negator and the loss of multiple negation may indicate that multiple negation contexts are a separate context for the change in the locus of NEG-features from head to specifier of NegP. However under Rowlett's account, licensing of multiple negation after the morpheme *ne* is lost requires a null head with LF-interpretable NEG-features, something I argued against in chapter 5.⁷ Ingham (2004, 161ff) argues for this approach to negative spread, and for negative doubling with *not*. Arguing that the Neg⁰ in negative doubling with *not* is actually the locus of NEG-features, implies that the morpheme *not* does not in fact bear NEG-features in these constructions, and is not a sentential negator. This is anomalous with its use as a sentential negator elsewhere. This finding is at odds with Ingham's account of multiple negation, and sufficient motivation to search for an account which does not make reference to NEG-features on the null Neg⁰.

Three more criticisms of Rowlett's account of Jespersen's Generalisation call it into question. First, this account does not explain the loss of negative spread in clauses in which *not* is absent. Second, it predicts no clauses with a mixture of multiple negation and NPIs. Although I have found no such examples in my Middle English data, Nevalainen (1996) gives some Early Modern English examples (278).

- (278) there shall no poore neghbore of myne berre no losse by eny chance...
 There shall no poor neighbour of mine bear no loss by any event...
 'No neighbour of mine shall bear any loss in any event...'
 (MORE Thomas More 423 (1529), Nevalainen (1996, 268, ex.3a))

Third, loss of the negative head *ne* leads to the development of a form of negative doubling with *not*. Late Middle English provides some apparent counterexamples to Jespersen's Generalisation. These are clauses in which *not* co-occurs with negative adjuncts (279) or arguments (280). If Jespersen's Generalisation holds, then in examples of multiple negation with *not*, *not* cannot be a sentential

⁷There, I argued that the PF realisation of the negative head as *ne* was only eliminated when *ne* became an agreement morpheme with unvalued [pol:] features. The loss of LF interpretability was found to be a precondition for the loss of the morpheme *ne* at PF.

negator. In order for these clauses to accord with Jespersen's Generalisation, it must be an adjoined adverb, or the negative head (Neg⁰).

- (279) And thenn our soverayne myght not no longer hyde his maryage
and then our sovereign might not no longer hide his marriage
'and then our sovereign might no longer hide his marriage'
(CMGREGOR,227.2288)
- (280) he schuld not begynne no werre withoute the same counsell
he ought not begin no war without the same advice
'he ought not to begin any war without the same advice'
(CMCAPCHR,137.3171)

This form of negative doubling indicates that a syntactic account enforcing complementary distribution of *not* and multiple negation is empirically inadequate. Interestingly, the frequency of negative doubling with *not* (n=137/145 or 94%) is much higher than the frequency of *not+anyXP* ((ex.281), n=8/145 or 6%) which is the pattern under Jespersen's Generalisation predicted to involve the sentential negator *not*.

- (281) a. he myzt not do ony thing
he might not do any thing
'he might not do anything'
(CMNTEST,IX.20.930)
- b. A man may not take ony thing
A man may not take any thing
'A man may not take anything'
(CMNTEST,III.20.222)

For negative doubling with *not* to be counter to Jespersen's Generalisation requires that *not* in negative doubling is in spec,NegP rather than an adjoined adverb or a head Neg⁰. In many examples, *not* is adjacent to the finite verb and is ambiguous between a spec,NegP position and a clitic or affix on the finite verb (279, 280). However, there are also examples of *ne...not* co-occurring with negative arguments (282, 283) in which *not* must be an XP, either in spec,NegP or an adjoined position.

- (282) ...thou ne schalt nat seen in no place no thing of yvel
...you NEG shall not see in no place no thing of evil
'...you shall see nothing of evil anywhere'
(CMBOETH,454.C2.565)

- (283) Gret grace is it of God whan þe wille of a man or a womman is so harde
 Great grace is it of God when the will of a man or a woman is so hard
 and roted fast in God þat he ne may not wawe for no temptacion.
 and rooted fast in God that he NEG may not waiver for no temptation.
 'God's grace is great when the will of a man or a woman is so firm and
 rooted fast in God that he may not waiver despite any temptation.'
 (CMVICES4,106.180)

Whilst all instances of *not* in these examples are potentially analysable as head (Neg⁰) or adjoined adverb, the diachrony of *not* in negative doubling fits with the analysis of *not* as a sentential negator rather than an adverb or a head. Table 6.11 shows the introduction of *not* in negative doubling contexts. These data show a gradually increasing frequency of negative doubling with *not* throughout Middle English, which is consistent with the introduction of the sentential negator *not* in other contexts. The final three columns show the frequency of *not* in the three sentential negation contexts discussed in chapter 5 for comparison. The introduction of multiple negation with *not* is most clear in the context of 'PP+negative quantifier', but is also seen in the context of negative NPs. Table 6.11 takes two negative doubling contexts, showing the frequency of negative doubling with *not* as a proportion of the total negative doubling context (involving both *ne* and/or *not*).

Period	Negative NP			PP+negative Q			% not in sentential negation		
	not	Total	% not	not	Total	% not	main cl	sub cl	sub to neg
1150-1250	0	0	–	1	59	2%	66%	35%	13%
1250-1350	1	178	1%	2	17	12%	88%	59%	36%
1350-1420	31	142	22%	36	49	73%	97%	94%	78%
1420-1500	21	33	64%	49	50	98%	100%	97%	100%

Table 6.11: The distribution of *not* in negative doubling contexts compared with its distribution in sentential negation contexts.

There is a clear move towards negative doubling with *not* in Late Middle English. We can see that although the overall frequency of *not* is much lower in negative doubling contexts than in sentential negation contexts, there is a consistent increase in the use of *not* across negative doubling contexts. This patterning is not consistent with the distribution of adjoined adverbs or of *not* as the negative head (which I argued is available in less than 5% of Late Middle English clauses, in section 5.3.3). The LME incidence of *not* in negative doubling is more common than either the incidence of adjoined adverb *not* or head *not* at the same

period. Neither the adjoined adverb or Neg⁰ analyses of *not* predict the observed gradual increase in *not* in negative doubling seen in Middle English. The gradual introduction of *not* in negative doubling is consistent with the introduction of *not* as a spec,NegP sentential negator under Jespersen's Cycle, as a consequence of competition between *ne* [pol:neg] and *ne* [pol:] (see chapter 5). The diachronic evidence points to the same change in negative doubling contexts as in sentential negation contexts, the introduction of *not* as a consequence of Jespersen's Cycle.

The analysis of *ne...not* I gave in chapters three and four makes clear that *not* is introduced in spec,NegP for the purposes of marking negation at LF. The fact that *not* is introduced in negative doubling as part of Jespersen's Cycle is an argument against Jespersen's Generalisation. This is also an argument for analysing at least some negative NPs and PPs as lacking [neg] features. Under my account of Jespersen's Cycle, *not* is introduced in order to provide a valued [pol:neg] feature for interpretation at LF. Therefore, the introduction of *not* in negative doubling implies that the concordant negative NP or PP does not have sufficient [pol:neg] features of its own to mark negation at LF.

Whilst the examples of *not* in negative doubling are structurally ambiguous in all instances, the crucial point is that the distribution of *not* in Late Middle English is not as Jespersen's Generalisation predicts particularly when viewed from a diachronic perspective. Rowlett's analysis predicts the loss of negative doubling as a consequence of the introduction of *not* in spec,NegP. His account predicts the emergence of negative doubling with *not*, only when *not* is reanalysed as a head.

However, Middle English provides no evidence of a stage without negative doubling which would be consistent with the use of *not* in spec,NegP under Jespersen's Generalisation. Instead, the introduction of *not* in negative doubling coincides with the introduction of *not* elsewhere under Jespersen's Cycle (see Table 6.11), albeit that *not* is less favoured in negative doubling contexts than elsewhere.

Given the standard cyclic development of sentential negation the shift from *ne* to *ne...not* and *not* should produce a corresponding shift away from multiple negation under Jespersen's Generalisation, and a return to it as *not* becomes a head. There is no historical evidence for the cyclic shift away from and return to multiple negation. The interaction of Jespersen's Cycle and Jespersen's Generalisation is schematised in Table 6.12 and compared to the observed developments in Middle English.

There should be a stage when *ne...not* and *not* co-occur with *any*-NPIs before a return to negative doubling contingent on the reanalysis of *not* as a head. The

Stage	Jespersen's Generalisation	Observed Middle English
EME	<i>ne</i> ... neg XP	<i>ne</i> ... neg XP
LME	<i>ne...not</i> ... <i>any</i> - NPI XP	(<i>ne</i>)... <i>not</i> ... neg XP
EMnE	<i>not</i> ... negative XP	<i>not</i> ... <i>any</i> - NPI XP

Table 6.12: Patterns of multiple negation predicted under Jespersen's Generalisation (Rowlett 1998), and observed in the historical English data.

LME data do not bear out this diachronic scenario. There are very few examples of *any*- NPIs in the scope of *not* in LME (284), far fewer instances (n=8) than there are of *not* in negative doubling (n=137).

- (284) þat God may not iuge folily ony man
that God may not judge erroneously any man
'that God may not judge any man erroneously'
(CMWYCSER,I,237.255)

The failure of Middle English to observe the predicted diachronic development indicates that Rowlett's proposed correlation between Jespersen's Cycle and multiple negation is not appropriate. Change under Jespersen's Cycle apparently pre-dates the introduction of *any*- NPIs into negative contexts in the history of English. The empirical facts lead to the conclusion that multiple negation is not directly linked to Jespersen's Cycle under Jespersen's Generalisation (Rowlett 1998, 87), and constitute an argument against a syntactic analysis which makes spec,NegP *not* structurally incompatible with negative arguments and adjuncts. This conclusion is not only based on the appearance of a negative doubling with *not* at an early stage of Jespersen's Cycle, which is not predicted, but also on the non-occurrence of the predicted patterns involving spec,NegP *not+any*-NPIs. Early Modern English witnesses the loss of both negative doubling with *not* and the loss of negative spread (Nevalainen 1996). Jespersen's Generalisation provides no account for the emergence of loss of negative doubling with *not*, as it is the introduction of *not* itself which is proposed to lead to the loss of multiple negation under this account.

Rowlett (1998) notes languages which are exceptions to Jespersen's Generalisation, which he seeks to accommodate within the syntactic analysis. In order to establish whether early English can be accommodated by his proposals, I will first outline Rowlett's syntactic analysis. Rowlett distinguishes the first stage of Jespersen's Cycle from later stages by the position of [neg] features within NegP. At stage one [neg] is associated with the head position. At stages two and three,

the [neg] feature is associated with the specifier position. Crucial to Rowlett's approach are the ways in which negation takes scope. He argues (following Progovac (1994)) that scope relations between two negatives are determined by A'-binding. Hence the negative head does not interact scopally with negative arguments or adjuncts which it C-commands, whilst the spec,NegP negative marker does, by virtue of its A'-position. A negative argument or adjunct A'-bound by spec,NegP *not* should therefore yield an interpretation of logical double negation rather than being interpreted as a single instance of sentential negation (as in multiple negation). See Rowlett (1998, 120ff) for more details of the analysis. Rowlett's account runs into another problem: as A'-binding is required for a double negation reading, his account provides no reason why negative spread between arguments in A-positions is lost in Early Modern English.

West Flemish is one of the exceptions to Jespersen's Generalisation. The sentential negative marker is *nie*. *Nie* can co-occur with negative arguments and adjuncts (285). Rowlett (1998, 127ff) observes that the concordant negatives all move to positions to the left of *not*. He follows Haegeman (1995) in claiming that this movement is necessary for the negatives to take sentential scope. Movement is to spec,NegP where negative absorption takes place. Negative absorption is an operation proposed by Haegeman and Zanuttini (1996) under which the [neg] features of negatives with the same scope are factored out, leaving a single [neg] feature in spec,NegP.

- (285) da Valere [an niemand] [niets] [nie] gezeid (en-) oat
 that Valere to no-one nothing not said NEG had
 'that Valere hadn't said anything to anyone'
 (Haegeman 1995, 133, ex.40a)

Rowlett argues that there are configurational constraints on multiple negation in West Flemish which demonstrate that it is not a generalised multiple negation language. Multiple negation is only available when all negative arguments and adjuncts move to spec,NegP and undergo negative absorption. There are no such configurational constraints on the co-occurrence of *not* and negative arguments in Middle English. In most examples *not* C-commands the negative argument (280-283). The overt multiple movement of West Flemish is not found in Middle English. While there is nothing to stop negative arguments and adjuncts from achieving the configuration required for negative absorption at LF by covert movement, admitting this possibility would render Jespersen's Generalisation vacuous, as LF operations could be invoked to deal with any exceptions. Therefore, propos-

ing that all ME negatives move to spec,NegP at LF does not seem an attractive solution.

Some of Rowlett's syntactic assumptions do not translate well into a more Minimalist framework. Jespersen's Generalisation is a configurational account of multiple negation which assumes, controversially, that scope relations are a product of A'-binding relations. If a more standard view of scope relations, based on C-command, is adopted, the syntactic basis of Jespersen's Generalisation is unformulable. ME data challenge the binding approach to multiple negation. Under Rowlett's analysis one negative cannot A'-bind another. Jespersen's Generalisation follows from the fact that negative operators such as *not* are in an A'-position, whereas negative heads are not in an A'-position. Contrary to the predictions of Rowlett's (1998, 122) account of negative spread, ME negative spread is licit when one of the negatives is in an A'-position. For example, the adverb *never* in an A'-adjoined position can enter into negative spread with a negative object (286).

- (286) a. *3e had neuyr no knowlach of me be-fore þis tyme*
you had never no knowledge of me before this time
 'You never had any knowledge of me before this time'
 (CMKEMPE,58.1293)
- b. *for they aske never nothyng of me*
for they ask never nothing of me
 'for they never ask anything of me'
 (CMMALORY,668.4914)

Conversely, an account based on A'-binding can never eliminate the possibility of negative spread between two arguments in A-positions (Rowlett 1998, 122), although we see from Nevalainen (1996) that such negative spread is lost in Early Modern English. Rowlett's account allows for negative spread between negative arguments, but provides no mechanism for parametric variation in negative spread in these contexts. His account does not accommodate the change seen between ME and Present Day Standard English. The distinction between ways of scope taking which Rowlett proposes is at odds with most other accounts of negative or quantifier scope. The simplest view of scope is defined on occurrences of LF interpretable features using the C-command relation. A [neg] feature which C-commands another [neg] feature takes scope over it (Ladusaw 1992, Giannakidou 2000, Roberts and Roussou 2003). This is the simplest view in a Minimalist framework where C-command is a primitive. It also respects semantic composi-

tionality: a clause with one [neg] feature is interpreted as negative, a clause with two [neg] features is a logical double negative and so on.

I propose that all multiple negation clauses have only one [neg] feature, to distinguish them from logical double negation which involves two or more [neg] features, one taking scope over the other. Therefore it follows that some of the morphologically negative words in multiple negation are negative in form only, and lack [pol:neg] features. The analysis of negative doubling with *not*, and negative spread in Late Middle English requires some of the negative words to be negative in form only, and lack [pol:neg] features. I have already argued that *ne* in the *ne...not* construction is one such negative word. The appearance of the sentential negator *not* in negative doubling indicates that at least some ME negative quantifiers require an analysis as lexical items underspecified for polarity, which are licensed by sentential negation. In the context of these quantifiers, when *ne* becomes insufficient to mark sentential negation itself, *not* is introduced.

Rowlett's analysis of French makes use of these polarity underspecified words to circumvent the restrictions on multiple negation which the analysis imposes. French is another exception to Jespersen's Generalisation. Rowlett (1998, 131ff) argues that those modern French negative arguments and adjuncts which appear in multiple negation are not really negatives, and are subject to licensing conditions similar to those licensing negative polarity items. Hence these polarity underspecified words can co-occur in a language which has a spec,NegP marker. Co-occurrence of *not* with *nothing*, *no-one* is attested in Middle English. Extending Rowlett's analysis of French to Middle English requires negative arguments (*nothing*, *no one*) and adjuncts (*no longer*) to lack [neg] features in Middle English in those cases where *nothing*, *no-one* co-occur with spec,NegP *not*, in contrast to their Present Day standard English counterparts.

A change in the features of negative arguments and adjuncts is sufficient in the Early Modern English period to account for the loss of multiple negation in all contexts. Negative arguments and adjuncts go from being underspecified for polarity and licensed by a superordinate negative, to having LF interpretable [pol:neg] features and thereby being self-licensing, and required to appear outside the context of a superordinate negation. The question is why this change should occur in LME and Early Modern English as it does.

Middle English offers little evidence that the introduction of *not* leads to loss of multiple negation in the way that Rowlett (1998) proposes. Jespersen's Generalisation does not fully explain the loss of multiple negation in Middle English.

However, the relationship between Jespersen's Cycle and the availability of multiple negation remains an open issue. Haegeman and Zanuttini (1996) propose that a negative head is present in all multiple negation languages. In section 6.5.1, I recast this idea in a Minimalist framework, arguing that syntactic agreement is required in multiple negation languages. However, it is not clear that a negative head is required to facilitate this agreement in all instances of multiple negation.

In this section, I demonstrated that Jespersen's Generalisation does not adequately characterise the diachronic interaction of Jespersen's Cycle and multiple negation in Middle English. The appearance of multiple negation is independent of the introduction of *not* and the loss of *ne*. We need an account of its loss which is less dependent on changes in sentential negation strategies. ME provides insufficient data to examine the loss of multiple negation in any detail. Further study of the loss of multiple negation using Early Modern English corpora will illustrate the relationship between the loss of multiple negation and Jespersen's Cycle more clearly in the diachronic data, and provide more detail concerning the loss of multiple negation and the factors conditioning the change. Nevalainen (1996) identifies extralinguistic factors relevant to this change, including the changing social evaluation of multiple negation in certain social groups.

The next section proposes an alternative account of the loss of multiple negation based on grammatical competition between competing forms of negative words: one set which are lexically specified as negative, the other which are underspecified for polarity. At present, these proposals should be regarded as hypotheses which require further empirical support using data from later periods of English. Here, I show that the ME situation provides a different perspective on the syntax of multiple negation and its loss in English within the Minimalist framework.

6.4 Middle English multiple negation and grammar competition

6.4.1 Jespersen's Cycle and multiple negation

We have seen that configurational accounts of multiple negation such as Jespersen's Generalisation (Rowlett 1998) do not address the variation and change

in Middle English multiple negation. Here I propose that the facts are more consistent with treating multiple negation as a subcase of NPI licensing (Ladusaw 1992). Giannakidou (2000, 463) proposes that only negative markers (such as early English *ne* and *not*) are negative in multiple negation languages. Other negatives are negative in morphological form only (concordant negatives). This accounts for the replacement of Neg^0 by $\text{spec,NegP } not$ in multiple negation when *ne* becomes insufficient to mark negation. Without a sentential negative marker concordant negatives are not licensed.⁸

In negative doubling clauses a sentential negator licenses a concordant negative word, irrespective of whether the sentential negator is *ne* or *not*. This is the situation which held throughout Old English and Early Middle English, when negative NPs, PPs or adverbs always co-occurred with *ne*. The shift from *ne* to *not* in negative doubling is simply a context of Jespersen's Cycle. *not* is required when *ne* becomes underspecified for polarity [pol:], as an alternative means to mark negation at LF. The concordant NP or PP is also underspecified for polarity and needs to be licensed by a [pol:neg] feature, so *not* is introduced. Under this account, I predict that all negative NPs or PPs must occur in negative doubling, with a [pol:neg] element, either *ne*, or when *ne* loses its [pol:neg] features, with *not*. However, the overall frequency with which negative quantifiers or adverbials co-occur with *not* in LME (Table 6.5) does not bear out this hypothesis. Negative doubling with *not* does not account for more than 3% of clauses with negative words. After the loss of *ne*, negative doubling with *not* is a minority pattern. The more typical pattern is for the negative quantifier or adverbial to be the only negative word in the clause.

This situation is explained if we assume that Middle English has two grammars, one which allows multiple negation, the other which does not. The grammar which permits negative doubling with *ne* or *not* is one of the two grammars involving negative words in Middle English. In the other grammar, negative words are not licensed by a negative marker, but are self-licensing negative quantifiers which negate clauses on their own. The majority of clauses without *ne*, in which negative NPs or PPs are the sole negative word, represent the latter grammar. Their distribution is consistent with them having LF interpretable negative features themselves, unlike concordant negatives. Therefore, I propose that both types of negative word are available in Middle English, those which are lexically

⁸I use the term licensed in a broad sense. The exact mechanism by which concordant negatives are licensed is discussed in section 6.5.1.

specified [pol:neg] and those which are not.⁹

This hypothesis differs from Jespersen's Generalisation proposed by Rowlett (1998). Jespersen's Generalisation describes two grammatical options, but aligns these two grammatical options with the availability of the sentential negator *not*. Under my hypothesis the availability of the multiple negation and non-multiple negation grammars is not connected to the introduction of *not*. So the question to be addressed is why ME shifts from one option to the other.

In contrast, Old English provides more evidence for lexically underspecified negative words. All co-occur with *ne*, and we know from patterns of sentential negation in which *ne* negates a clause on its own, that *ne* has the feature [pol:neg].¹⁰ However, we also know that Jespersen's Cycle introduces a form of *ne* which is underspecified for negation [pol:]. We see that this featural change has no overt manifestation in most negative doubling contexts unlike sentential negation contexts, although we have seen that it leads to the introduction of *not* in some instances of negative doubling. On the evidence of negative doubling with *not*, I propose that the feature change underlying Jespersen's Cycle happens in multiple negation contexts too. This has the advantage of unifying sentential and multiple negation.¹¹ I assume that a change will happen uniformly in all contexts, unless there is evidence to the contrary. However, the manifestation of this change is different in sentential and multiple negation clauses. In multiple negation clauses, the loss of [pol:neg] features on *ne* under Jespersen's Cycle results in strings like (287) which are ambiguous. These clauses provide evidence for two alternative licensing conditions on multiple negation, one in which *ne* licenses the concordant negative word, and one in which the negative word licenses *ne*. The language learner can assign these clauses one of two representations (287).

- (287) a. *ne* [pol:neg] ... negative word
 b. *ne* [pol:] ... negative word[pol:neg]

The loss of [pol:neg] features on *ne* under Jespersen's Cycle results in reanalysis and competition between two different types of negative word, one type which is self-licensing [pol:neg] and another which is licensed by a superordinate negator. However, the competition between *ne* [pol:neg] and *ne* [pol:] is not

⁹The morphosyntactic features of concordant negatives will be the subject of section 6.5.1.

¹⁰Although we must allow for some negatives with the feature [pol:neg] in cases of constituent negation.

¹¹Unlike the analysis of Jespersen's Cycle proposed by Frisch (1997).

simultaneous with the reanalysis of negative words in all instances. There are a small number of concordant negative words even at stage two of Jespersen's Cycle when *ne* has [pol:] features. In clauses with this type, the requirement for the clause to contain an LF-interpretable [pol:neg] feature forces the introduction of *not* as a licenser of both *ne* and the concordant negative word.

This approach facilitates a description of variation and change in Middle English multiple negation as competition between two sets of homophonous lexical items, one of which is lexically specified for negation, conveys negation at LF, and is self-licensing rather than requiring licensing by a C-commanding negative. The second is not lexically specified for negation, does not convey a negative meaning at LF, and must be licensed by a superordinate negative. These are the two parametric options which Ladusaw's (1992) account makes available. The competition between them arises from reanalysis of a string which is rendered ambiguous by an independent change (*ne* [pol:neg]>[pol:]), which I argued drove Jespersen's Cycle chapters 4 and 5). Although Jespersen's Cycle provides the impetus for the reanalysis, the subsequent process of competition is independent of Jespersen's Cycle, as shown by instances of negative doubling with *not*, and variation and change in the availability of negative spread.

The existence of negative spread provides evidence for two types of negative word one which is underspecified for negation, the other which is not. Negative spread follows naturally from this account. The two competing forms of negative word can co-occur, as the one with [pol:neg] features licenses the one with [pol:] features. Unlike Ingham (2004) this analysis does not make any recourse to a null head to license negative spread. Loss of negative doubling with *not* and loss of negative spread will be simultaneous reflexes of the competition between the two types of negative words as the competition draws to its end in Early Modern English. Presumably these contexts, which provide unambiguous evidence for underspecified negative words will disfavour the use of negatives with LF interpretable [pol:neg] features throughout the change. Use of *any*-NPIs in negative contexts will be by default as underspecified negative words are lost. From a language typology point of view, this account makes negative spread a consequence of a language having two different types of negative words. Hence negative spread is typologically marked, a consequence of a language in transition from having concordant negative words to having non-concordant negative words.

The present study faces the problem that there are insufficient data show-

ing the loss of multiple negation to investigate its loss. This topic awaits further research using Early Modern English corpora. However, I predict that the frequency of *not* in multiple negation continues to increase only as *ne* [pol:neg] is replaced by *ne* [pol:], so there should be no large scale increase in the use of negative doubling with *not* in Early Modern English once this change is complete. I also predict that the loss of negative doubling and the loss of negative spread should be parallel, as they are reflexes of the same competition between concordant and non-concordant arguments and adjuncts.

The proposed account derives the two patterns of negation attested in Present Day English clauses with indefinites: *no*-negation where the structurally highest indefinite is negated (288), and *not*-negation where the indefinite is realised by an *any*-NPI C-commanded by the negative marker *not* (289). The terminology is taken from Tottie (1991) who examines the variation between these two negation strategies in Present Day English.

(288) He wrote nothing

(289) He didn't write anything

The Middle English antecedents of this variation are clauses with self-licensing, non-concordant negative words (*no*-negation), and negative doubling with *not* (*not*-negation). *No* negation demonstrates reanalysis of a negative argument or adjunct as [neg] sufficient to mark sentential negation and presumably achieving scope by some form of quantifier raising. *Not* negation indicates the former presence of negative doubling with *not*. This is the only way *not* could be introduced into the context of an indefinite. The replacement of the concordant negatives by an NPI must have happened at a later date when negative doubling with *not* was already established. Future study of Early Modern English should show whether these conjectures are on the right lines. It also remains to be seen whether the factors which influence the PDE distribution of these two negation strategies, such as register (Tottie 1991), also influence the distribution of their Middle English antecedents, and how the variation develops historically.

6.4.2 Multiple negation and negative inversion

Nevalainen (1997) observes an Early Modern English increase in subject verb inversion following initial negative phrases such as *never*, *neither*, *nor* (290), in the Early Modern English periods of the Helsinki Corpus (1640-1710). See Nevalainen

(1997, 209) for data and discussion. She correlates this with the loss of multiple negation. My analysis of the loss of multiple negation as grammatical competition throws new light onto this correlation, both changes might be consequences of the development of negative (LF \neg) quantifiers.

- (290) I perceyve your opinion of owre monneyes, which dissentyth not partely
I perceive your opinion of our money, which dissents not partly
from others I have herd of beffore; neither dyde I suppose anny better
from others I have heard of before; neither did I suppose any better
sequele of it
sequel of it
'I perceive your opinion of our money, which does not differ in part from
others I have heard before; neither did I suppose any better sequel to it'
(CEEC; ANTHONY CAVE 1476, Nevalainen (1997, ex.8))

Initial non-negative phrases behave differently. For the adverb *then* which robustly triggers inversion of finite verb and pronominal subject throughout Old and Middle English, the frequency of inversion declines in the Early Modern English period to as little as 12% in the mid seventeenth century. Nevalainen (1997) claims that 'Thinking of *never* as an established adverb one would have expected it to have retained the inversion rule just like the non-negative adverbs' (Nevalainen 1997, 209).

Nevalainen observes that the increase in inversion following initial negatives parallels the loss of multiple negation described in Nevalainen (1996). The account I propose here provides a means of formally unifying these two developments. Both are reflexes of the loss of concordant negatives and their replacement by inherently negative arguments and adjuncts.

Initial negatives come to be interpreted as a monotone decreasing or non-veridical context by virtue of their [neg] features, acquired as multiple negation is lost. Negative quantifiers replace concordant negatives which are quantificational but not monotone decreasing or non-veridical. The loss of concordant negatives also leads to the loss of multiple negation in the standard language. Quantitative evidence for a link between increased negative inversion and the loss of multiple negation, in the form of the Constant Rate Effect (Kroch 1989), awaits study with Early Modern English corpora. Nevalainen (1997) observes lexical diffusion of inversion following initial negatives. It remains to be seen whether the loss of multiple negation follows the same pattern of lexical diffusion.

6.4.3 Concordant negatives in Middle English: indefinites or quantifiers?

I will now turn my attention to the licensing conditions for concordant negatives, showing that an analysis of concordant negatives as indefinites, parallel to Present Day English negative polarity items (NPIs), does not fully capture the distribution of concordant negatives in Middle English. Ladusaw (1992, 237) asks 'which of the occurrences of negative phrases in a clause showing negative concord expresses the negation?'. In answering this question, I show that the C-command relation does not hold of concordant negatives and their licensor at spell-out in Middle English. This, along with other properties I discuss, distinguishes concordant negatives from indefinites.

Ladusaw (1992) proposes an abstract expression of negation which does not correspond to any of the morphologically negative formatives, is not necessarily overt, and which is outside VP. He claims that concordant negatives require a licensor which is outside VP, either Neg^0 , spec,NegP or an element like a negative subject which moves through spec,NegP during the derivation. An element with [neg] features must C-command concordant negatives in Spanish and Italian, for example (291). I have argued against an approach which requires an abstract operator to license multiple negation, instead making use of morphosyntactic features on morphologically overt lexical items. This has the advantages of compositionality and learnability.

Two analyses of concordant negatives have been proposed: as indefinites (Ladusaw 1992, Deprez 1997) and as quantifiers (Giannakidou 2000). Giannakidou (2000, 472) analyses concordant negatives as universal quantifiers. Giannakidou (2000) distinguishes syntactic and semantic licensing conditions on concordant negatives, in a way which might be useful to distinguish these two possibilities. The licensing conditions on quantifiers and indefinites are different. The quantificational force of quantifiers allows them a measure of syntactic freedom which is not available to indefinites (which are variables without any quantificational force, following Diesing (1997)). For Giannakidou (2000), concordant negatives are quantificational and can move higher than their licensor, providing they are licensed during the derivation. NPIs such as PDE *any* are indefinites and therefore bound to appear in the scope of existential closure (Diesing 1997).

6.4.4 Multiple negation and locality

Concordant negatives in Spanish and Italian must be C-commanded by a negative at S-structure (291). Multiple negation is not available when the concordant negative appears outside this configuration, for example when a concordant negative C-commands a negative marker (292). Labov (1972) shows the same subject-object asymmetry holds of *any*-NPIs in Present Day English. NPIs must be C-commanded by their licenser. All the examples of *any* I have seen in Middle English negative clauses conform to this pattern too. This is an argument for regarding concordant negatives in Italian as indefinites like English NPI *any*.

- (291) a. *(Non) ha visto nessuno
NEG has seen no-one
'I did not see anyone'
(Italian, Deprez (1997, 55, ex.1))
- b. *(no) compre nada
NEG buy nothing
'I did not buy anything'
(Spanish, Deprez (1997, 55, ex.1))
- (292) a. Nessuno (*non) ha telefonato
No-one (*NEG) has called
'No-one called'
(Italian, Deprez (1997, 55, ex.4))
- b. Nadie (*no) comio
No-one (*NEG) ate
'No-one ate'
(Spanish, Deprez (1997, 55, ex.4))

There is no complementary distribution between sentential negative markers and negative subjects in Middle English (293). They can co-occur with a multiple negation interpretation. This indicates that some negative subjects in ME (293) can be concordant underspecified negative words, licensed by negative doubling with the negative marker *not*, even though they are not C-commanded by *not*. ME concordant negatives do not need to be C-commanded at spell-out by a negative which is lexically specified [pol:neg] in order to be licensed. There is no pre-/post-verbal asymmetry unlike in Italian or Spanish. This is an argument for differentiating concordant negatives in Middle English from Italian concordant negatives which are indefinites.

- (293) a. & noman knoweth not the cause
and no-one knows not the cause
'and no-one knows the cause'
(CMMANDEV,100.2424)
- b. For þei seyn þat none so foule synfull men scholde not come in so
For they say that none so foul sinful men should not come in so
holy place.
holy place.
'For they say that no such sinful men should come into such a holy
place'
(CMMANDEV,53.1316)
- c. and nowther man ne best ne nothing þat bereth lif in him ne
and neither man nor beast nor nothing that bears life in him NEG
may not dyen in þat see
may not die in that sea
'and neither man nor beast nor anything that bears life may die in that
sea'
(CMMANDEV,67.1677)

The relevant licensing conditions on ME concordant negatives can be met during the derivation, or by LF reconstruction of subjects to their vP internal position C-commanded by the negative operator. Middle English provides no evidence of C-command as a licensing condition on concordant negatives at spellout. Concordant negatives have syntactic properties which allow them to escape vP, unlike indefinites (Diesing 1997). Further evidence of this status comes from rightward movement of negative objects out of VP (van der Wurff 1999a, Ingham 2000, Pintzuk and Taylor 2003), such as evidence of their scrambling across adverbs (294). See section 6.4.3. This is good evidence that ME concordant negatives are quantifiers rather than indefinites.

- (294) he ne may noþing wel conne
he NEG can nothing well know
'he can know nothing well'
(CMAYENBI,117.2247)

Giannakidou (2000) gives several further tests for distinguishing quantifiers and indefinites. Negative polarity items are typically analysed as indefinites. Therefore, a comparison of the distribution of negative polarity items and negative arguments or adjuncts shows whether negative arguments and adjuncts are

indefinites. Locality constraints differentiate negative arguments from the negative polarity item *any*. *Any* can be licensed in the scope of negation irrespective of intervening finite clause boundaries (295).

(295) I didn't say that you thought you wanted to badmouth me to anybody
Giannakidou (2000, 471, ex.27)

However, both Giannakidou (2000) and Zeijlstra (2004) observe locality constraints on multiple negation. Multiple negation can be established only across subjunctive, but not indicative clause boundaries. In ME, multiple negation is largely clause bound. There are exceptions to the clause boundedness of multiple negation (Ukaji 1999). These fall into three main groups (Ukaji 1999):

1. The clausal complements of '... verbs of predicates expressing belief or opinion: *advise, believe, deem, think, trow, ween*' (Ukaji 1999, 284), of predicates expressing modality. Ukaji (1999) lists *be pertinent, need, will* (main verb) and modal verbs. Finally concordant negatives appear in the clausal complements of verbs expressing cognition: *know, see, understand, wit* (Ukaji 1999, 284).

- (296) a. and he tolde hym that he hade no wrytyng nor evidens of no
and he told him that he had no writing nor evidence of no
swyche thyng..., ner not *wyst* were he scholde haue
such thing..., nor not *knew* where he should have
knowlage of no swyche thyng
knowledge of no such thing
'and he told him that he had no writing or evidence of any such
thing..., nor knew where to gain knowledge of any such thing'
(ca.1459 *Paston Letters* 152.4-6, Ukaji (1999, ex.24))
- b. *Nulle* ich þet nan iseo ow bute he habbe of ower
NEG-intend I that none see you except he has of your
meister spetiale leaue
master special leave
'I do not intend that any should see you except he who has spe-
cial leave of your master'
(ca. 1230 *Ancrene Wisse* 14b. 24-26, Ukaji (1999, ex.8))

2. Infinitival complements of verbs in negative clauses.

- (297) a. yette woll I nat wyghte my lady to be in no joupardye
 yet will I not allow my lady to be in no jeopardy
 'Yet I will not allow my lady to be in any danger'
 (a. 140 *Malory Works* 127.18-19, Ukaji (1999, ex.21))
- b. I whollde not awyse yow to ressaue none of this mony tyll
 I would not advise you to receive none of this money until
 my Loor cum himselfe
 my Lord comes himself
 'I would not advise you to receive any of this money until my
 Lord comes himself'
 (1481, *Cely Letters* 121.13-14, Ukaji (1999, ex.22))

These contexts are ones in which the dependent clause does not have the force of an assertive declarative. They all involve non-declarative mood, expressing hypotheses, potential or possible states of affairs or conditions. Zeijlstra (2004, 267) argues that multiple negation can hold between main verb and subjunctive CP complement because subjunctive CPs are deficient in force features.¹²

Ukaji (1999) notes a further context for wide scope multiple negation: Subject relative clauses which are the subjects of existential *be*

- (298) Ther ys no mane byd no mony for them. . .
 There is no man bid no money for them
 'There is no man who bid any money for them'
 (1480 *Cely Letters* 91.27-28, Ukaji (1999, ex.34))

These relative clause examples are more difficult to characterise. They involve multiple negation across an assertive declarative CP. Ukaji (1999, 277) suggests the nominal head of the relative clause starts out as the subject of the lower clause. Therefore, the licensing relation holds between two elements in the same clause prior to movement of the relative clause's subject to a higher position.

The strict locality of multiple negation constitutes another argument that an analysis of Middle English concordant negatives as indefinites like *any*-NPIs is inappropriate. There are two possible reasons for the locality of multiple negation. Giannakidou (2000) argues that such locality follows from an analysis of concor-

¹²Further evidence for the special status of subjunctive clauses in respect of locality comes from anaphora. Giorgi (2004) claims that subjunctive clauses do not block movement out of the clause and that anaphors in subjunctive clauses can have main clause antecedents, unlike anaphora in indicative clauses.

dant negatives as quantifiers, whose scope is clause bound by definition. Zeijlstra (2004) on the other hand, argues that concordant negatives are indefinites, but are subject to local syntactic licensing conditions unlike *any*-NPIs which are not. However, the differences are analysed, the fact that the distribution of ME concordant negatives within the clause is unlike NPIs at any stage of English is an argument for distinguishing concordant negatives from NPIs. Negative quantifiers move out of VP at all stages of English, which constitutes an argument for their status as quantifiers throughout English.

Negatives are only licensed in a subset of the contexts available to NPIs. NPIs are licit in both negative and non-negative clauses of the following types: interrogatives, conditionals, modal verbs, comparatives, clausal complements of verbs of mental attitude such as *doubt*, *believe*. NPIs can also appear in clauses dependent on any of the above clause types, irrespective of the polarity of the main clause. Concordant negatives only appear when licensed by a negative or polarity operator. Ladusaw (1992) characterises the difference between the two sets of contexts in semantic terms. NPIs are licensed in monotone decreasing or downward entailing contexts, whereas concordant negatives are licensed only by negation, an anti-additive context. Giannakidou (2000, 468) makes the same distinction in different terms. For her, NPIs are licensed in non-veridical contexts, which are contexts which do not entail the truth of the proposition they express. Concordant negatives are licensed in anti-veridical contexts: contexts which entail the falsity of the proposition they express.

The strict licensing requirements and locality constraints on concordant negatives suggest that a syntactic account of multiple negation is a plausible one. This is the approach I will explore in the next section.

6.5 Minimalist accounts of multiple negation

Current views of variability in Minimalism, under which the locus of variation is the lexicon, force the difference between multiple negation and non-multiple negation languages to be a consequence of the features present on particular lexical items within the lexicon. This is in line with Ladusaw (1992), van der Wouden (1994) who view the difference between multiple negation and non-multiple negation languages as lexical ambiguity or variability. It fits with the view of multiple negation I have taken in this chapter. However, I have not yet characterised the difference between concordant and non-concordant negative

words, and the licensing conditions on multiple negation in syntactic terms. In this section, I will investigate the possibility that the licensing conditions on multiple negation are syntactic, and that the difference between multiple negation and non-multiple negation languages is due to a difference in the morphosyntactic features of negative words.

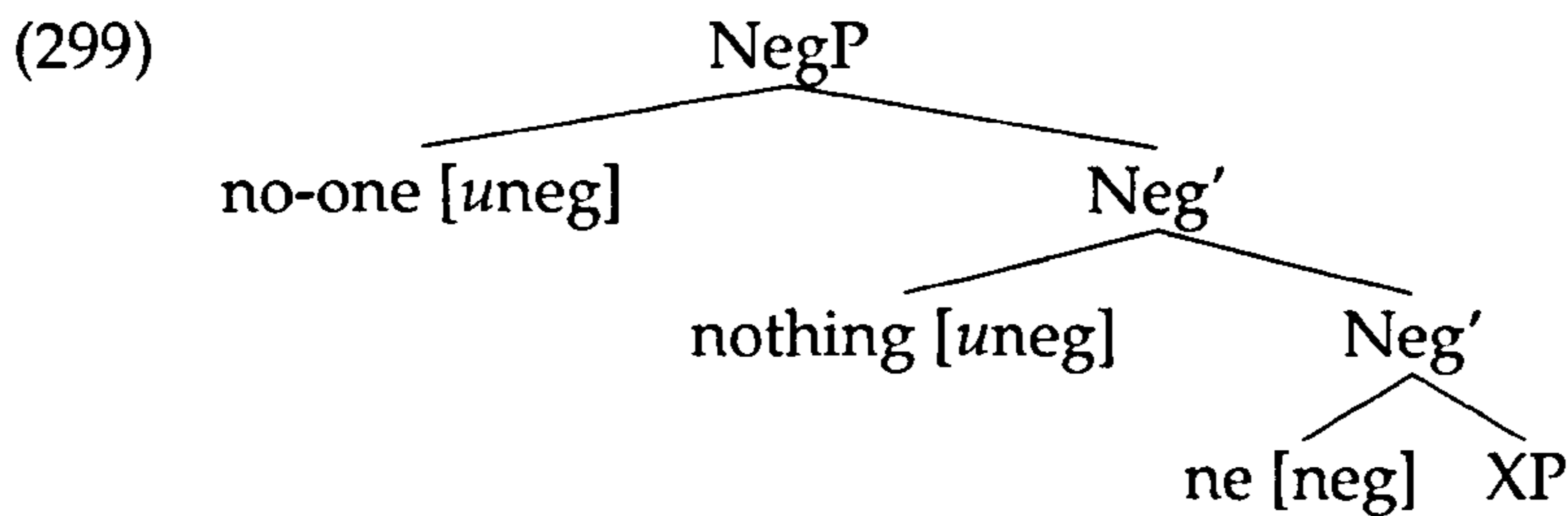
This approach facilitates a parametric approach to multiple negation, which observes compositionality at LF, and can account for the locality constraints on multiple negation. I propose the following morphosyntactic distinction as my working hypothesis, which I will examine here, and pursue more extensively in future research. A multiple negation language is one which has a feature checking relation between negative words. Multiple negation languages have negative words with features which must be valued, double negation languages do not.

1. Languages without multiple negation have [pol:neg] features on all their negative words, each is interpreted as a logical negative at LF, hence multiple negation is impossible.
2. Languages with multiple negation have negative words which have an unvalued [pol:] feature which must be valued during the derivation, causing them to enter into a dependency with another negative word or a negative marker which has [pol: neg] features.

Hence the licensing configuration for multiple negation must be an instance of one of the configurations in which morphosyntactic features can be valued. That is, a probe [pol:] must be valued by features of a goal [pol: neg] in the same way that all other morphosyntactic features are valued. The distinction between types of negative words is not a new one. Brown (1999), Adger and Smith (2003) have put forward similar proposals to parametrise multiple negation.

6.5.1 Multiple negation as morphosyntactic feature checking

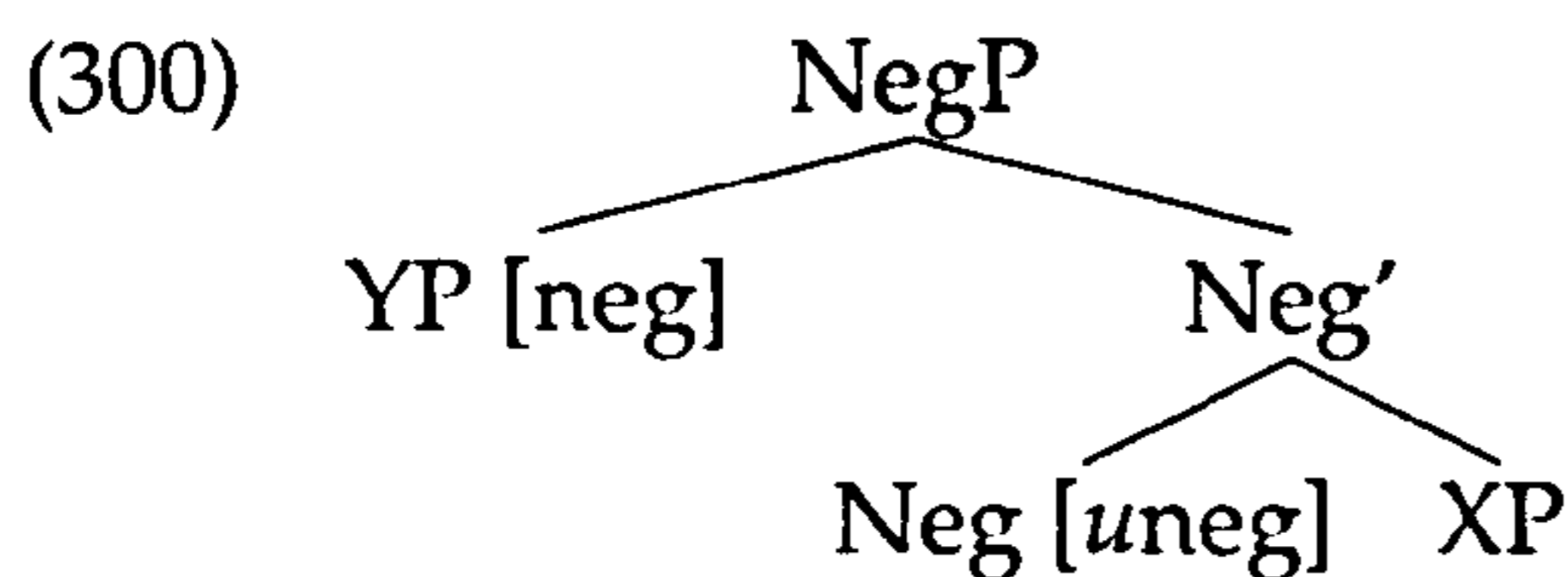
The biggest difficulty for a Minimalist approach is to establish the configurations in which concordant negatives are licensed. Both Brown (1999) and Adger and Smith (2003) propose spec-head agreement between a single head and multiple specifiers. The head bears an interpretable [neg] feature which values uninterpretable negative [*uneg*] features on negative arguments or adjuncts which move to spec,NegP for the purpose of feature checking (299).



All negative phrases must enter into a feature checking relation with the negative head to be interpreted as negative. This will check and delete their $[uneg]$ features, with the result that only the negative head is interpreted as negative $[neg]$. Hence the single negation reading. For Brown, the required feature checking configuration is specifier-head, achieved either overtly by movement or at LF by covert movement.

Brown's (1999) mechanism of feature checking follows Chomsky (1995), by which the uninterpretable features of the moved element force movement into the specifier of a matching head (299). This type of feature checking is motivated by uninterpretable or unvalued features of the goal, rather than the probe (as in Chomsky (1999; 2000)), and is known as 'Greed'. There is no formal reason why this type of feature checking should not be recursive, applying to each goal which has matching uninterpretable $[uneg]$ features. However, this type of feature checking is inconsistent with the mechanism Chomsky proposes in later work. In later versions of the Minimalist framework, (Chomsky 1999; 2000) the mechanism of feature checking is revised to make feature checking more local and less reliant on look-ahead.¹³

In Chomsky (1999; 2000), unvalued features of the target of movement (heads) initiate feature checking by probing into their complement for matching features. Feature checking is always driven by uninterpretable features on functional heads (300).



Therefore both Brown's proposals and those of Adger and Smith (2003) are at odds with the most recent version of feature checking. Chomsky's (1999, 2000)

¹³In order for Greed to work at the point where a goal with $[uF]$ is merged, we need to look ahead in the derivation to find a C-commanding head with a matching interpretable feature, suitable for feature checking. If no such matching interpretable feature is introduced the derivation will crash at the interfaces due to an undeleted $[uF]$.

version of feature checking is not recursive and does not allow multiple movement. There is a one to one relationship between features of the head and matching features of the concordant negative word, after which the checked features of the head are valued, they become inactive, and cannot probe again. These formal constraints make multiple negation difficult to accommodate in a framework of morphosyntactic feature checking. Negative doubling can be analysed as feature checking between valued [pol:neg] on a negative word and unvalued [pol:] on a negative head, in a one-to-one agreement relation. However, this does not allow for negative doubling with spec,NegP *not*, or for negative spread between negative words. It also does not address the representation of multiple negation at stage one of Jespersen's Cycle when *ne* has valued [pol:neg] features. At this stage, we might propose that concordant negatives have unvalued [pol:] features, valued by agreement with the negative head, but the appropriate configurations for feature valuation remain to be established. What is needed here is a way for a Neg⁰ [pol:neg] to value several [pol:] features, subject to appropriate locality conditions.

Proposals have been made which allow for multiple agreement between a valued feature and several unvalued features of the same type. Frampton and Gutmann (2000), Hiraiwa (2001) propose that multiple unvalued features can be valued in a single syntactic operation, providing a valued feature of the same type does not intervene between them. It follows that when any occurrence of [pol:] is valued, all the others will be valued simultaneously.

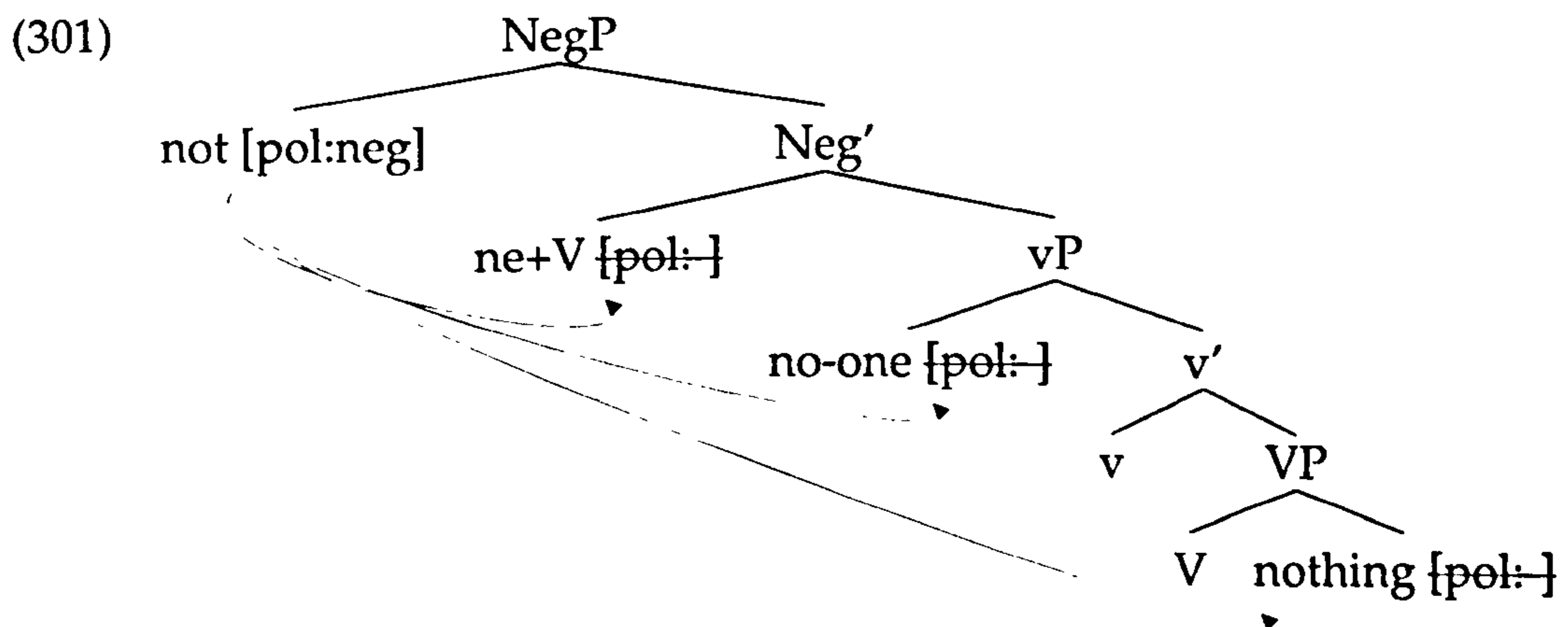
This will hold of all matching features in all material which has not yet been spelled out (the current phase and the previously completed phase according to Chomsky (1999)). This reduces the locality conditions on multiple negation to the locality conditions applying to all syntactic operations.

In the following pages, I present a speculative first attempt at an analysis of multiple negation as morphosyntactic feature checking, which makes use of the idea of multiple agreement between all matching features before spellout. More work remains to be done to refine this hypothesis. Here, I consider clause bound multiple negation only. The application of multiple feature checking to multiple negation dependencies varies according to the negators involved. I distinguish negative doubling with *ne*, negative doubling with *not* and negative spread. First, I describe negative doubling with *not*, which is the simplest case.

In negative doubling with the sentential negator *not* (301), all [pol:] features C-command each other and are valued as a result of spec-head agreement at

NegP with Neg⁰ [pol:] as the probe. *not* is merged to value the [pol:] features of Neg⁰. This operation also values the [pol:] features of the negative quantifiers which *not* C-commands because no matching inactive features intervene between the two [pol:] features at the point in the derivation where *not* is Merged. This follows as a straightforward case of multiple agreement in the sense of Frampton and Gutmann (2000) and Hiraiwa (2001). The derivation is shown in (301), where the arrows are used to mark multiple Agreement (probe-goal) dependencies. All the [pol:] features are valued simultaneously at the point where *not* is Merged.¹⁴

This configuration requires agreement between *not* and Neg⁰, even when Neg⁰ is non-overt at stage three of Jespersen's Cycle. Hence the account of stage three of Jespersen's Cycle I gave in chapter 5 needs modification. There, I argued that *not* at stage three of Jespersen's Cycle is a vP adjunct, and does not enter into any Agree relations. The negative doubling data provide evidence for an Agree relationship between *not* and Neg⁰ even when Neg⁰ is non-overt: without this Agreement in NegP, [pol:] features lower in the structure can never receive a value from *not*. The loss of negative doubling with *not* rather than the loss of the morpheme *ne* marks the loss of the [pol:] feature on a functional head, and the syntactic agreement relation between *not* and Neg⁰. Multiple negation provides sufficient evidence of the Agree relation which leads the language user to postulate a null Neg⁰ with [pol:] features.

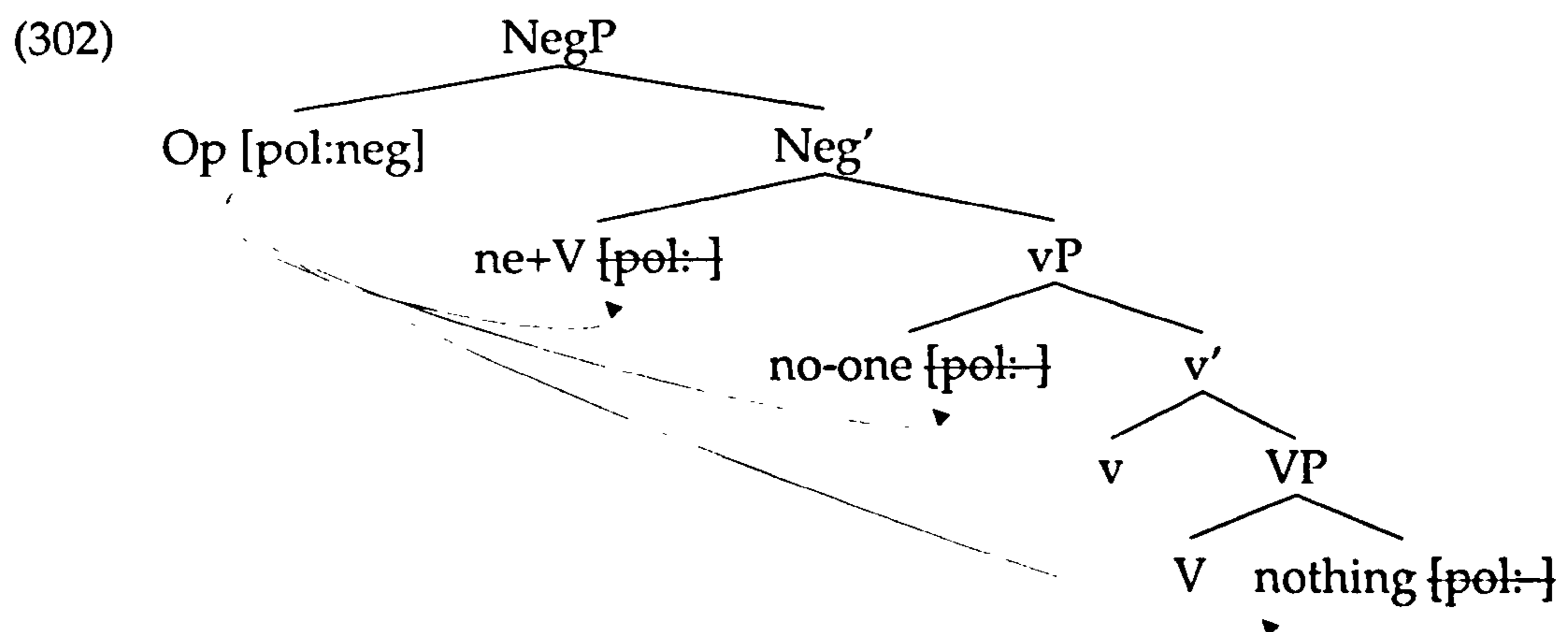


Zeijlstra (2004) proposes a similar account for negative doubling with a negative head (like ME *ne*), in which there is spec-head agreement between Neg⁰ *ne* [pol:] and a null spec,NegP operator [pol:neg]. The syntactic configuration is shown in (302). It is the same as in (301) but for the form of the element bear-

¹⁴This analysis is also sufficient to license the ME uses of redundant *ne* which are embedded under negated main clause predicates, providing multiple agree can be established across the relevant types of CP.

ing [pol:neg] features: *not* in (301), a null operator in (302). The configuration of features and the mechanism of feature valuation is the same in both.

Let me now turn to the issue of whether an analysis of multiple negation with *ne* requires the configuration in (302) with a null operator which has [pol:neg] features. Recall that there are two possible feature configurations associated with *ne* in Middle English: *ne* [pol:neg] and *ne* [pol:]. So why does multiple negation involve *ne* [pol:] rather than *ne* [pol:neg]? The simple reason is that *ne* [pol:neg] does not act as a probe. It does not initiate any Agree relations. [pol:] features C-commanded by *ne* can never be valued by multiple Agreement with *ne* as the valued and unvalued features are not in a legitimate configuration for multiple feature checking. For multiple feature checking to be licit, there must be an instance of probe-goal or specifier-head Agreement from which all matching unvalued features can receive a value parasitically. If *ne* has only the feature [pol:neg], no such instance of Agreement can be established. One solution is to require *ne* itself to Agree in [pol:] features with some other element, such as a null [pol:neg] operator. This is similar to the operator-variable binding approaches in the Government-Binding literature such as Haegeman (1995).



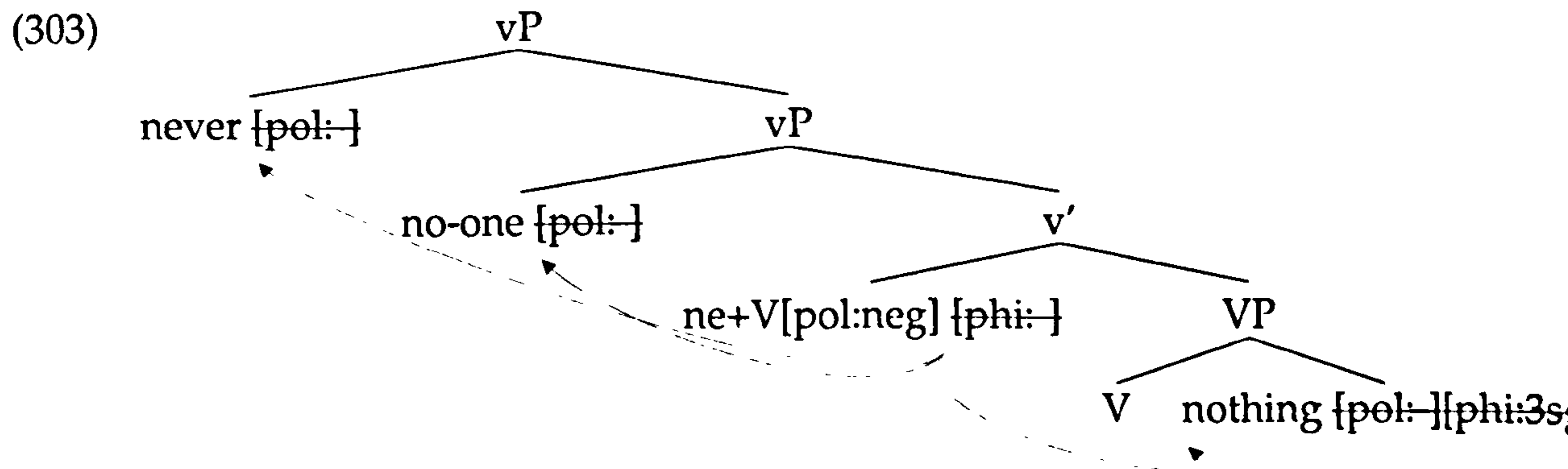
The null operator is introduced in order to ensure syntactic agreement and feature valuation, but it is at odds with my account of Jespersen's Cycle, in which I eschewed null operators. Instead I distinguished two types of *ne*, *ne* [pol:] which enters into a dependency with *not*, and *ne* [pol:neg] which does not enter into a dependency with *not*. The problem for an analysis of negative doubling, is that negative doubling is available at all stages of Jespersen's Cycle, with *ne*, *ne...not* and *not*.

So I need first to determine whether multiple negation contexts should be considered syntactically parallel to sentential negation contexts at each stage of Jespersen's Cycle. Do they undergo the same change in the feature specification

of *ne*? If so, I need a way which allows *ne* [pol:neg] to enter into dependencies with negative arguments and adjuncts.

Given my assumptions, cases of negative doubling with *ne* are more difficult than negative doubling with *not*. At this stage *ne* is not required to enter into an Agree relation with any other element to check its own features, yet it Agrees with negative arguments and adjuncts in multiple negation.

It is not clear that we need the null operator to value [pol:] features of concordant negatives if we make the checking of [pol:] features parasitic on other syntactic operations, involving a lower head such as v^0 (303). Locating [pol:neg] on *v*, will mean that [pol:] features on the subject are checked locally as the subject is Merged into spec,vP. The same local checking configuration holds of adjuncts which are in the outer specifier of vP, or adjoined to vP. Adjunction of adjuncts with [pol:] features to vP will ensure they receive a value as they are sufficiently local to the head *v* which has [pol:neg] features to receive a value from it by Agree. Finally, [pol:] features of the negative object can be checked as a side effect of object case/ ϕ -feature checking with *v* (303). Case and phi-feature checking by Agree between *v* and the object establishes a relation upon which [pol:] feature checking can happen parasitically.



The derivation in (303) proceeds as follows:

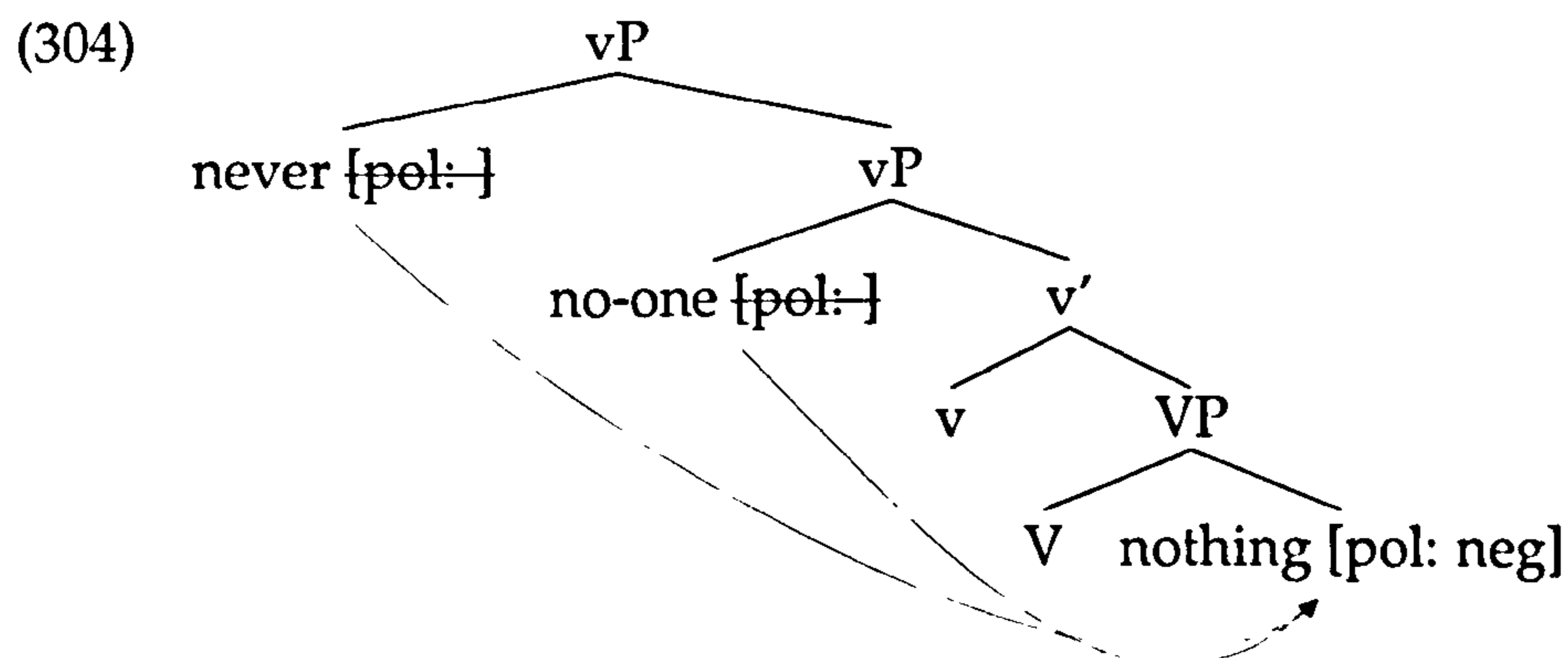
1. *v* is merged with a valued [pol:neg] and an unvalued set of ϕ -features.
2. The [phi:] features check against [phi:3sg] of the object *nothing*.
3. This establishes the Agree relation between [pol:neg] on *v* and [pol:] on the object, as a consequence of which [pol:] on the object is valued parasitically.
4. The negative subject *no-one* is merged in spec,vP. The [pol:] feature on *no-one* probes for a matching feature. The subject is in a local spec-head configura-

tion with *v*, so its [pol:] feature receives a value from the [pol:neg] feature of *v*.

5. The negative adverb *never* is adjoined to *vP*. Its [pol:] features probe for a matching goal, and Agree with [pol:neg] on *v*, which *never* C-commands.
6. All features valued during the derivation are deleted at spell-out.

Thus, multiple negation can be seen as a local operation within *vP*, which happens prior to the displacement of material to higher positions. The only additional consequence of this proposal is that *ne* does not head an independent NegP. This is consistent with the distribution of *ne* and *not* (which is an outer specifier of *vP* or specifier of a proxy projection (Nash and Rouveret 1997)), which I outlined in chapter 4.

Finally, cases of negative spread fall out of this model without reference to a null Neg⁰ or negative operator: a higher negative with [pol:] C-commanding a lower negative with [pol:neg] will agree with it in the standard probe-goal way. This operation will iterate for all negatives with [pol:], providing each [pol:] C-commands a [pol: neg], see (304).



6.5.2 Summary: multiple negation and feature checking

In this section, I have proposed a syntactic hypothesis which accounts for the empirical facts of Middle English negative doubling and negative spread, based on morphosyntactic feature checking. It is possible to construct a theory without reference to a null negative operator. However, the feature checking mechanism I adopt is not that of Chomsky (1999; 2000). Multiple feature agreement is required. Frampton and Gutmann (2000), Hiraiwa (2001) argue for multiple feature checking on independent grounds. Their proposals make a syntactic account of multiple negation possible. More work is required to refine this hypothesis and

explore its implications and its predictions concerning the loss of multiple negation in Early Modern English. However, my discussion of ME indicates that an approach to multiple negation in terms of morphosyntactic features, and of its loss in terms of competition between lexical items with different feature specifications is a possible one which merits further research.

6.6 Summary and Conclusions

This chapter has shown that Old and Middle English are multiple negation languages and has sought a syntactic analysis of this fact which distinguishes Old and Middle English from Present Day standard English, which does not employ multiple negation. I have shown variability in the availability of multiple negation in both Old and Middle English which is unrelated to Jespersen's Cycle. *Not* is introduced into negative doubling contexts in the same way it is introduced elsewhere. Therefore, the link which Rowlett (1998) proposes between Jespersen's Cycle and multiple negation is not borne out in the Middle English data. Study of a diachronic situation in real time indicates that Jespersen's Generalisation makes inappropriate predictions concerning the availability of multiple negation in Middle English. The loss of multiple negation in English postdates the introduction of *not* under Jespersen's Cycle. Furthermore, Jespersen's Cycle introduces *not* into some clauses with negative arguments and adjuncts. *not* is not in complementary distribution with negative arguments or adjuncts as Jespersen's Generalisation predicts. A less direct link between Jespersen's Cycle and the availability of multiple negation is more empirically appropriate for Middle English. Jespersen's Generalisation makes inappropriate predictions regarding the diachrony of multiple negation in Middle English.

I proposed an alternative account under which there are two types of negative words in competition in the Middle English period. Loss of [pol:neg] features on *ne* creates the conditions for reanalysis of negative words as [pol:neg] items, which then diffuse through all contexts by grammar competition between morphosyntactic doublets: negative words specified [pol:neg] and negative words underspecified [pol:]. Although the loss of multiple negation is not directly linked to Jespersen's Cycle, change under Jespersen's Cycle provides the conditions for the grammatical competition which leads to the loss of multiple negation in Early Modern English. Finally, I suggested that this account has useful potential to explain the rise of negative inversion in Early Modern English (Nevalainen

1997) and variation between *no*-negation and *not* negation (Tottie 1991) which survives in Present Day English.

The theoretical focus of this chapter has been to provide an account of multiple negation which preserves semantic compositionality and is consistent with the Minimalist syntactic framework. The Principle of Full Interpretation bars absorption or factorisation of LF interpretable features and forces the conclusion that only one of the negatives in multiple negation can bear the interpretation of sentential negation at LF. Variation in the lexicon between concordant negatives which are negative in morphological form only [pol:], and negatives which bear negation at LF [pol:neg] emerges as a consequence of the loss of [pol: neg] features on a functional head (v^0). The loss of [pol:neg] on the head means that the syntactic configuration underlying multiple negation changes, so that one of the concordant negative words must mark negation at LF, and is reanalysed as having [pol:neg] features. This innovative form diffuses by grammar competition until there are no concordant negatives left. The loss of concordant negatives means the loss of multiple negation. Without concordant negatives, the feature checking relation which underlies multiple negation can no longer be established.

In order to support this account of the loss of multiple negation, I put forward a hypothesis for multiple negation licensing as morphosyntactic feature checking of unvalued [pol:] features. The account I propose has the advantage of maintaining compositionality. Locality constraints support the idea that concordant negatives are quantificational in Middle English, and that they are licensed syntactically. They do not share the same distribution as negative polarity items, which have been analysed as indefinites. Concordant negatives differ from other quantifiers by their need to be licensed in the context of a polarity operator. This licensing requirement is difficult to analyse within the most recent Minimalist version of feature checking (Chomsky 2000), but I argued a syntactic analysis is possible once we allow multiple feature checking.

A new perspective on the relationship between multiple negation and Jespersen's Cycle follows from my syntactic account (cf. Zeijlstra (2004) for alternative proposals based on feature checking). Two syntactic facts distinguish multiple negation languages from logical double negation languages. First, in multiple negation languages some negative words are underspecified for polarity [pol:]. Second, multiple negation languages are those in which a syntactic Agree relation can be established between [pol:] and [pol:neg] features. Negative spread should be a very uncommon, diachronically transient stage of languages

which are undergoing change, as it arises from the co-occurrence of two competing types of negative word. Those negatives which are concordant are licensed by those which are not. As the loss of concordant negatives proceeds, negative spread will be lost. Negative spread is just one of several negation strategies in Middle English, which include multiple negation with *not*, and negation strategies which do not involve multiple negation. These arise out of morphosyntactic competition between negatives with [pol:] features and those with [pol:neg] features. This competition is an indirect consequence of change in the locus of [pol:neg] features under Jespersen's Cycle. Middle English is in the transition from a multiple negation language to a double negation language. Further examination of the loss of multiple negation awaits study with Early Modern English corpora.

Chapter 7

Conclusions

7.1 Introduction

The research presented in the preceding chapters integrates quantitative models and methods, textually based analysis of syntactically parsed corpora and recent Minimalist theory to provide a new perspective on Jespersen's Cycle and other changes to the syntax of negation in the early English period. I show that a Minimalist perspective on parametric variation allows empirically relevant distinctions to be made between successive diachronic stages in the syntax of early English negation, which are supported by data from diachronic change. In this chapter, I will provide an overview and an assessment of the contribution of the present research to understanding of three areas: early English negation, grammaticalisation and linguistic change, and a Minimalist syntax of negation.

I demonstrated the importance of quantitative data in establishing the parameters relevant to the changing syntax of negation. Different analyses make different predictions concerning the structure of change over time. Therefore, quantitative modelling of change over time allows syntactic hypotheses to be tested. The test of each syntactic analysis is whether it accounts for variation and change in a way which is consistent with quantitative evidence of the change within the logistic model. I apply this methodology to three large issues in the history of English negation, drawing the following conclusions with regard to previous analyses:

1. Quantitative data do not support Frisch's (1997) analysis of Jespersen's Cycle as two independent but intersecting morphological changes.
2. Rowlett's (1998) analysis of Jespersen's Cycle makes predictions concerning

the relationship of Jespersen's Cycle and the availability of multiple negation which are not borne out.

3. Quantitative data do not support the change from $XP\ ne$ to $X^0\ ne$ which van Kemenade (2000) proposes to account for Jespersen's Cycle and the loss of negative initial clauses.

This chapter will bring together my empirical findings into a coherent theory of parametric change in English negation. My empirical findings support a Minimalist view of parameters. The range of parametric variation is entirely consistent with the options made available by the Minimalist framework. This is an advance, the Minimalist theory of parametric variation has been based largely on synchronic studies. Here, I show that it accommodates diachronic variation, making appropriate predictions concerning the structure of change over time.

I adopt recent approaches to parametric variation in which the notion of parameter is highly constrained along Minimalist lines. I follow proposals in Roberts and Roussou (2003) and Kroch (1994) which make the lexicon the locus of morphosyntactic and parametric variation. Parametric variation is reduced to variation in the morphosyntactic feature specification of lexical items. However, my proposals concerning parametric variation differ from Roberts and Roussou (2003), who argue that all parametric variation is in the phonological realisation of already existing positions in a given syntactic structure. My account allows variation in the phonological realisation of positions as does Roberts and Roussou (2003), but it also allows highly constrained parametric variation in syntactic structures through variation and competition between valued and unvalued morphosyntactic features. Unvalued features must enter into syntactic dependencies in order to receive a value, so change in the value associated with a feature has syntactic effects on syntactic distribution of that item, imposing conditions on the item which it did not have previously. This has important implications for the phrase structure of negation which changes at successive stages of Jespersen's Cycle, with consequences for the status of NegP as a functional projection.

This is a severe restriction on what counts as a parameter, which impacts on the way changes to negation are analysed in English. Parametric variation is limited to the syntactic effects of the distribution of valued and unvalued features in the lexicon, namely, the occurrence or non-occurrence of particular syntactic dependencies with a given head, and whether these are specifier-head dependencies resulting from Merge or long distance dependencies resulting from

Agree. The means by which these dependencies are satisfied is determined by the computational algorithms Merge and Agree, which underpin all syntactic operations. The mechanisms of Merge and Agree remain invariant. Differences in morphosyntactic features result in differences in the application of syntactic processes. Throughout this thesis, I have shown that the dependencies into which negative items enter are subcases of the dependencies allowed within a feature based Minimalist framework. The dependencies which hold between negative items are the result of their morphosyntactic features and can be subsumed into a general theory of feature checking.

The role of the language learner is crucial in mediating between primary linguistic data in the input and a syntactic representation in which all parameters are unambiguously set. This is hardly a novel observation. I follow a long tradition of work in the Principles and Parameters model which gives primacy to the language learner (Lightfoot 1979; 1999). I assume that each language learner constructs his or her own unique grammar on the basis of primary linguistic data. However, the role of the language learner is slightly different under a Minimalist approach than under previous Principles and Parameters approaches, as notions of computational complexity and economy become relevant to the learning algorithm.

The structure of this chapter is as follows. I will discuss the impacts of my findings on theories of parametric variation within the Minimalist framework. My account of negation as a whole relies on the idea that parametric variation results from highly constrained variation in the distribution of morphosyntactic and phonological features within the lexicon. I will discuss what I consider to be my most significant finding: the Minimalist analysis of Jespersen's Cycle which the quantitative data support. This provides a new approach to grammaticalisation, which differs from the most recent Minimalist treatment of grammaticalisation in Roberts and Roussou (2003). I will discuss the theoretical and typological implications of my analysis here. Some implications for the syntactic representation of negation follow. Finally, I will outline some issues in the syntax of negation which my thesis does not address. The present work suggests some perspectives on these issues which I will examine in future work.

7.2 Jespersen's Cycle, grammatical competition and grammaticalisation

7.2.1 Jespersen's Cycle and grammatical competition

A Minimalist, feature-based conception of parametric variation allows for an account of Jespersen's Cycle as grammatical competition, and informs a view of grammaticalisation which is different from that proposed by Roberts and Rousou (2003). A Minimalist syntactic framework does not accommodate redundancy in syntactic representations, such as that proposed by Frisch (1997) within NegP at stage two of Jespersen's Cycle. Through detailed quantitative work, I establish the progress and properties of the reanalyses involved in Jespersen's Cycle. Modelling the changes involved within the grammatical competition model (Kroch 1989) provides a coherent view of the changes which is compatible with Principles and Parameters approaches, and Minimalist theory in particular. I propose a feature-based account in which the loss of *ne* is contingent on the introduction of *not*, hence Jespersen's Cycle is formalised as three distinct and autonomous syntactic stages.

1. Stage One: unsupported *ne* [pol:neg]
2. Stage Two: *ne* [pol:] ... *not* [pol:neg]. [pol:] on *ne* is valued by Agree with *not*.
3. Stage Three: *not* [pol:neg] (a vP-adjunct or specifier of a null head with [pol:] features¹)

Quantitative data showing the progress of changes to negation and their interaction to constitute Jespersen's Cycle leads me to challenge the previous account of Jespersen's Cycle in Frisch (1997), who argued that Jespersen's Cycle comprises two changes, loss of *ne* and introduction of *not*, which intersect to produce *ne...not*. First, Jespersen's Cycle does not proceed uniformly across all clause types. Once differences between clause types are taken into account, Frisch's redundant licensing model, based on the independence of changes involving *ne* and *not* fails to provide an adequate fit of the data in all clause types. The incidence of *not* is

¹These two possibilities cannot be distinguished, except in multiple negation contexts, in which I argued that a [pol:] feature on a head is required to allow the agreement between *not* and negative words.

lower in subordinate clauses and clauses within the scope of a negative than it is in main clauses throughout the entirety of the change.

The factors which condition the change from *ne* > *ne...not* are different from the factors which condition the change from *ne...not* > *not*. This shows that the data should be subdivided to allow for these two distinct changes. Different changes affect *ne* at successive stages of Jespersen's Cycle. Hence, the evidence from change points to grammatical competition between two different types of *ne* each subject to a different change: unsupported *ne* and supported *ne* at the first two stages of Jespersen's Cycle. The difference is formalised in terms of morphosyntactic features, *ne*[pol:neg] at stage one, *ne* [pol:] at stage two.² The properties of the changes affecting the two types of *ne* are different, as are the time courses of the two changes. Loss of unsupported *ne* is sensitive to clause type. It results from morphosyntactic competition between *ne* [pol:neg] and *ne* [pol:]. Loss of supported *ne* is not sensitive to clause type.

This competition between *ne* [pol:neg] and *ne* [pol:] is independent of the morphological loss of *ne*, which affects only supported *ne*, that is *ne* which has unvalued [pol:] features. The change from [pol: neg] to [pol:] must precede the loss of *ne* in all contexts (including multiple negation), as it creates a dependency which makes sentential negation morphologically identifiable on another element at LF and makes *ne* redundant as a negative marker.

These findings directly challenge Frisch (1997) who argues that the loss of *ne* is a single change. Once differences between clause types are taken into account, Frisch's (1997) redundant licensing model fails to model the subordinate clause data. I show that the redundant licensing model of Jespersen's Cycle (Frisch 1997) structures the variation and changes involved in Jespersen's cycle in a way which takes insufficient account of the properties of the change modelled over time using quantitative data. Frisch (1997) overlooks crucial contextual factors affecting the distribution of *ne* and *not* which inform an account of the change. The way these factors affect the distribution of grammatical options at successive stages of Jespersen's Cycle shows that the loss of *ne* is not a homogeneous process of change, but rather two processes of change, which are conditioned by different factors. The loss of unsupported *ne* is a morphosyntactic change, conditioned by syntactic factors such as clause type. The loss of supported *ne* is not conditioned by the same factors. Subdividing the change in this way makes sense of the pat-

²I also provide evidence for this distinction from the changing distribution of redundant *ne* in ME.

terns of variation between the competing grammatical options at each stage of Jespersen's Cycle.

Bipartite negation arises because there is a time lag between the morphosyntactic feature change and the loss of *ne*. At LF, *ne...not* involves no redundancy, although there is redundant morphological marking of negation at PF. At this stage, the language learner has strong motivation to eliminate *ne* as it is redundant as a negative marker at both LF and PF. At stage two of Jespersen's Cycle *ne* is an agreement marker similar to the verbal {s} marking subject-verb agreement. There are formal parallels between the Neg-head and the Agr-head which hosts underspecified or unvalued features. Subsequent changes under Jespersen's Cycle follow from computational economy. The morpheme *ne* is lost at PF as it is redundant. The subsequent morphologisation of *not* as a negative head which happens in Early Modern English (van Kemenade 2000, 69ff) is economy driven. It eliminates a syntactic dependency between specifier and head which is no longer robustly motivated by morphological evidence. This has the effect of making Jespersen's Cycle a cyclic shift from valued to unvalued features on the negative head: *ne* [pol: neg] > *ne* [pol:] > 0 [pol:] > *not* [pol: neg] which does not always correspond to morphological changes at PF.

For a time, there are two distinct types of *ne* of which the syntax must take account, one of which enters a syntactic dependency with *not*, the other which does not enter into a syntactic dependency. These are subject to different processes of change which operate according to different constraints, in different modules of the grammar. I argue that this evidence of two types of *ne* can be given a structural correlate in Minimalist syntactic theory which distinguishes supported *ne* from unsupported *ne*. I do not claim that this is a necessary part of the model of change I have adopted. The diachronic model does not imply the correctness of the syntactic model. There may be other ways to formalise my diachronic data. However, the syntactic model I adopt has advantages over previous syntactic models. First, it accounts for parallels between the availability of bipartite *ne...not* and expletive *ne* in clauses like (305) at a particular point in Middle English: both have unvalued [pol:]. It is only when *ne* has unvalued [pol:] features that it can enter into wide scope multiple negation with a negative marked [pol: neg] in the main clause. There is a striking diachronic parallel between the availability of these constructions and stage two of Jespersen's Cycle in Middle English.

- (305) *ne doute the nat that alle thinges ne ben don aryght*
ne doubt you not that all things ne are done rightfully

'Do not doubt that all things are done rightfully' (Chaucer's Boethius IV P5,49)

Second, Minimalism provides a means to analyse Jespersen's Cycle as grammatical competition which eluded Frisch (1997), and provides an account of the different processes of change involved in the cycle. Third, it links the availability of syntactic dependencies to overt morphological evidence for those dependencies, which requires less abstraction on the part of the language learner. The difference between fully specified or valued features, which are syntactically autonomous, and underspecified or unvalued features which must obtain their value by entering into a syntactic dependency with matching valued features allows a spec-head dependency between *ne* and *not* to emerge during the history of English. This is a matter of parametric variation (understood in the featural sense). Morphosyntactic feature change accounts for the rise of *ne...not* as a distinct system of negation. The methodology by which I arrive at this conclusion involves synthesis of three areas of linguistics: recent Minimalist syntactic theory, quantitative methodology and models of change, and textually based study of data from two new large scale syntactically parsed corpora of Old and Middle English, the York-Toronto-Helsinki Parsed Corpus of Old English Prose (Taylor et al. 2003) and the second edition of the Penn-Helsinki Parsed Corpus of Middle English (Kroch and Taylor 2000a). My approach provides quantitative support to Minimalist theoretical proposals in a way which previous studies of syntactic change in the Minimalist framework (Roberts and Roussou 2003) do not.

I claim that this model makes Jespersen's Cycle amenable to analysis as two processes of grammatical competition in the strictest sense of competition between mutually exclusive grammatical options (Kroch 1994). This is a significant advance for the empirical coverage of this model. Frisch (1997) argued that the grammatical competition model needed to be adapted and weakened in order to account for Jespersen's Cycle. The competition he proposes between *ne* and *not* is not between exclusive options, as they co-occur, resulting in *ne...not*. I propose a model which preserves the ideas of the grammatical competition between mutually exclusive grammatical options, understood in terms of mutually exclusive morphosyntactic feature specifications on a negative head. Grammatical competition is compatible with Minimalist accounts of parametric variation between lexical items with incompatible feature values. The Middle English grammaticalisation of *not* as a sentential negator is analysed as two processes of grammatical

competition, one morphosyntactic, the other purely morphological.³ Grammatical competition between two negative heads differing in the value of their [pol:] features ([pol: neg] versus [pol:]) drives the spread of *not* (section 5.5). These two negative heads are structurally incompatible and differ minimally in a single morphosyntactic feature, in accordance with Kroch's (1989) formulation of grammatical competition as competition between incompatible structural competitors. The second process of grammatical competition is between a head with the unvalued [pol:] feature and a head without this feature. Jespersen's Cycle can be entirely accounted for by changes in the way the negative head behaves. This account is particularly minimal as differences in the syntactic configurations involved in Jespersen's Cycle follow from these changes. I claim that grammaticalisation involves a change in morphosyntactic features which precedes the loss of a morpheme. The change in morphosyntactic features is the primary force behind grammaticalisation of *not* in the syntax.

A grammatical competition account addresses the distribution of two lexical items over time. However, it says nothing about the emergence of the variants in competition. A parameter resetting approach to language change (Lightfoot 1999) forces us to adopt the view that new morphosyntactic variants arise through reanalysis of primary linguistic data on the part of the language learner, leading to a novel morphosyntactic feature specification for a particular lexical item. There is little clear evidence for the reanalysis of *not* in the Old or Middle English data. This is perhaps not surprising, as reanalysis occurs when a surface string is structurally ambiguous, mapping equally well onto more than one syntactic representation. Thus the string *ne...nawiht* in early English has two possible analyses: *nawiht* is an nominal adjunct of extent in negative doubling with *ne* (306), or as a secondary negator used to support *ne* which is lacking LF [neg] features (307).

(306) *ne* [pol: neg] ... *nawiht* [pol:]

(307) *ne* [pol:] ... *not* [pol: neg]

The configurations of morphosyntactic features involved in these two representations are distinct (306), (307), but equally well supported by the Primary Linguistic Data available to the language learner. Minimalism does not allow for

³There is arguably a third process of grammatical competition involving morphosyntactic features which marks the transition from specifier to head *not* in Early Modern English, but this change is outside the scope of this thesis.

any indeterminate representations or any ambiguity, each string must uniquely map onto a syntactic representation. In my approach, ambiguity in the string plays a crucial role in reanalysis, but this role is in the process of language learning rather than the formal syntactic representation. The reanalysis of *nawiht* from lexical to functional meaning is arguably a simplification (see Roberts and Roussou (2003, 209ff)), but leads to the innovation of a feature checking dependency which is arguably a complication of the grammar, an imperfection (see Chomsky (1995; 2000)). Structural simplification in one area leads to structural complication in another.

Structural ambiguity does not provide adequate motivation for change, it merely establishes the possibility of variation in syntactic representation of a particular string, and the form which this variation will take. It does not provide the reason why one variant is favoured over the other, which is required for the two variants to compete rather than vary. Competition involves an extension of the use of *not* into new contexts, including those where its previous reading as an adverb of extent is not available. In my account, the spread of *not* can be formally motivated by weakening of the features of *ne* so that *ne* is deficient at one of the interfaces, therefore requiring the support of *not*. Diffusion of *not* is a response to ambiguity and competition between two types of *ne*. This is an advance over previous accounts (Frisch 1997, Roberts and Roussou 2003) in which the spread of secondary negators is essentially unmotivated. At the second stage of Jespersen's Cycle, *ne* requires co-occurrence with *not* for convergence at the LF interface.

We know from previous studies that there is evidence for phonological weakening of unstressed syllables and a consequent simplification of morphology in the case and agreement system in late Old and early Middle English at about the same time as the changes in negation are taking hold in Late OE and Early ME. Phonological weakening of *ne* may provide the conditions for reanalysis of negative adverbs as secondary negators in OE and ME, and hence for the emergence of a new grammatical option for marking negation. Already in OE we can see that the clitic behaviour of *ne* marks it out as phonologically weak.

Weakening of *ne* provides the language learner less clear evidence to associate the PF representation *ne* with negation at LF. In those clauses which have a potential alternative marker of negation which has greater phonological bulk and therefore greater salience to the language learner, a reanalysed structure might be preferred as [neg] features are more clearly morphologically identified. Of

course, this is difficult to establish as the written record provides no evidence from which this change can be reconstructed. Surface ambiguity is a necessary condition for reanalysis in the model. Phonological weakening may favour the representation *ne...not* [pol:]....[pol:neg], as the expression of negation at LF receives a clearer phonological and morphological exponent in the secondary negator.

The reanalysis which actuates Jespersen's Cycle associates morphosyntactic [neg] features with *nawiht*. It acquires grammatical features and loses its already weak quantificational restriction. This is arguably a simplification from lexical > functional features, in the sense that the number of morphosyntactic features associated with *nawiht* is reduced. I claim that the changes affecting *nawiht* are not unique to *not*. Distributional parallels between Old English *na* and Middle English *not* indicate that the grammaticalisation of secondary negators has happened more than once in the history of English.⁴ Old and Early Middle English show a degree of variation in which form is used as a secondary negator. However, both have weak lexical meaning in common, making them prone to reanalysis as functional elements.

7.2.2 The interaction of Jespersen's Cycle and multiple negation in the grammatical competition model

In chapter 6 I argued that *not* and multiple negation are not in complementary distribution, as Rowlett (1998) predicts. The distribution of *not* and the loss of multiple negation are crucial in determining the relationship between Jespersen's Cycle and multiple negation. The Middle English facts are as follows: *not* can appear in multiple negation, so there is no motivation for an analysis which derives the complementarity of *not* and multiple negation (as for example Rowlett (1998) does). I use this fact to establish that multiple negation and *ne...not* represent different types of syntactic dependencies. LME data show the introduction of *not* in clauses with negative quantifiers. If *ne...not* and multiple negation represented the same dependency, there would be no motivation to introduce *not* into multiple negation contexts for feature checking reasons. Rowlett (1998) and other approaches which take *ne...not* and multiple negation to be distinct instantiations

⁴Roberts and Roussou (2003, 156) argue that a range of secondary negators also emerged in medieval French *pas*, *mie*, *goutte* from the lexical meanings 'step, crumb, drop'. As in English, only one (*pas*) survived to stage three of Jespersen's Cycle in French.

of the Neg-criterion (Haegeman 1995) face this problem. I capture the difference between *ne...not* and multiple negation by assigning *not* valued [pol:neg] features, whilst negative quantifiers in multiple negation have unvalued [pol:] features. The [pol:] feature on these quantifiers must receive a value, either from *ne* [pol:neg] at stage one of Jespersen's Cycle, or from *not* [pol:neg] at stage two of Jespersen's Cycle. This account predicts the introduction of *not* into multiple negation contexts in the same way as elsewhere.

I showed that *not* is introduced in multiple negation contexts as in other contexts, but that the overall frequency of *not* in multiple negation is lower than in sentential negation contexts. It follows from the analysis of Jespersen's Cycle I propose that a change in morphosyntactic features, from [pol:neg] to [pol:], should happen in all contexts at the same rate although the frequency of the innovative form will not necessarily be the same in all contexts. This includes clauses with negative adjuncts or arguments. Following Kroch's Constant Rate Hypothesis, this is the null hypothesis. I speculated that morphosyntactic feature change on the head *ne* from [pol:neg]>[pol:] is manifest by the introduction of *not* in these contexts as elsewhere, primarily as a way to derive the emergence of *not* in contexts where Rowlett's (1998) analysis predicts it should not appear. The ME situation shows that the introduction of *not* is not responsible for the loss of multiple negation in the way Rowlett (1998) predicts. From the argumentation so far, we expect that multiple negation should continue to be productive at stages one and two of Jespersen's Cycle. This is true, but leaves open the questions of why multiple negation was lost, and why *not* is less frequent in multiple negation contexts than elsewhere. These two issues are linked.

Recall that I proposed that the loss of multiple negation results from competition between two types of negative quantifiers: one which has [pol:] features and is licensed by agreement in multiple negation with another negative, and one which has the feature [pol:neg] which is self-licensing. Negative spread results from the co-occurrence of these two types of negative quantifiers, so that neg+Q [pol:neg] licenses neg+Q [pol:]. The process of competition between these quantifiers is similar to the competition between the two forms of *ne* involved in Jespersen's Cycle. It ultimately leads to the loss of multiple negation. Multiple negation requires at least one negative with an unvalued [pol:] feature which can enter into a dependency with a valued [pol:neg] feature. Each negative clause must contain only one [pol:neg] feature. The loss of items bearing [pol:] features will lead to the loss of multiple negation.

The questions to be addressed are how and why this process of competition comes into being.⁵ I argued in chapter 6 that the change in the morphosyntactic features of *ne* is instrumental to the loss of multiple negation. Competition between *ne* [pol:neg] and *ne* [pol:] underlying Jespersen's Cycle precipitates the loss of multiple negation by inducing the reanalysis of negative quantifiers as negative markers at LF with [pol:neg] features.

At stage one of Jespersen's Cycle (308) *ne* has [pol:neg] features, therefore all negative quantifiers in multiple negation with *ne* must lack [pol:neg] features in order for a multiple negation reading to obtain. A negative clause can contain maximally one [pol:neg] feature. In chapter 6, I claimed that the negative quantifiers at this stage bore [pol:] features which needed to be valued in a local (specifier-head, or head complement) relation with the [pol:neg] features on *ne* which is an affix on v^0 .

(308) *ne* [pol:neg] ... nothing [pol:]

(309) *not* [pol:neg] ... *ne* [pol:] ... nothing [pol:]

(310) *ne* [pol:] ... nothing [pol:neg]

Once stage two of Jespersen's Cycle is reached (309) *ne* loses its [pol:neg] features and has an unvalued [pol:] feature. Hence *ne* is no longer sufficient to check the [pol:] features of the negative quantifiers. There are two solutions to this problem, both of which are attested in Middle English. First, introduce *not* in this context as elsewhere. If we allow multiple feature checking (Hiraiwa 2001, Frampton and Gutmann 2000), then the [pol:neg] features of *not* will value all the [pol:] features on both *ne* and the negative quantifiers (309). Alternatively, one of the concordant negative quantifiers is reanalysed as a marker of negation at LF. That is, it has [pol:neg] features which will value all instances of [pol:] on both *ne* and any other negative quantifiers in the clause (310). The introduction of *not* cannot be motivated for feature-checking in (310). The introduction of *not* in multiple negation is not required when the negative quantifier becomes an LF marker of negation (with [pol:neg] features) through reanalysis. The syntactic analysis of multiple negation differs at stages one and two of Jespersen's Cycle (308-310). Change under Jespersen's Cycle allows a new structural analysis of

⁵Its effects remain to be examined in more detail in Early Modern English data, but this research is outside the scope of this thesis. See section 7.4 for some comments on issues for further research.

negative quantifiers to emerge and compete with the established negative quantifiers. Hence change in the negative dependencies available at stages one and two of Jespersen's Cycle indirectly leads to the loss of multiple negation by initiating a second process of grammatical competition between two types of negative quantifiers. This process of competition is not complete until the Early Modern English period.

This reanalysis of negative quantifiers as [pol:neg] leads to a duality in negative quantifiers: one set with [pol:], the other with [pol:neg]. The two forms co-occur in negative spread (311).

- (311) a. þan had He neuer no begynnyng
 then had He never no beginning
 'then He never had any beginning'
 (CMEDTHOR,46.717)
- b. no man seyð no-thing a-gens hem
 no man said nothing against him
 'no man said anything against him'
 (CMKEMPE,33.730)

The loss of multiple negation results from competition between these two types of quantifier, with neg+Q [pol:neg] winning out over neg+Q [pol:], presumably because unambiguous linguistic evidence for neg+Q [pol:], which comes from multiple negation, is much weaker than the evidence for neg+Q [pol:neg] in LME and Early Modern English.

Negative spread and negative doubling with *not* emerge because the loss of neg+Q [pol:] and the loss of *ne* [pol:neg] are not simultaneous developments. Competition between neg+Q [pol:] and neg+Q [pol:neg] is initiated by Jespersen's Cycle, but goes to completion long after Jespersen's Cycle itself. Negative spread and negative doubling with *not* are alternative ways of licensing neg+Q [pol:] whilst competition between neg+Q [pol:] and neg+Q [pol:neg] is ongoing.

The loss of multiple negation is a simplification of the syntax of negation. Unvalued [pol:] features are eliminated, and along with them syntactic dependencies between negative items. The resulting system is simpler from a learnability point of view as each negative morpheme which marks negation at PF also bears morphosyntactic negative features which are interpretable at LF. The implications of my analysis for variation and change in multiple negation remain to be worked out more fully, using more extensive Early Modern English data to examine the loss of multiple negation in more detail. However, my work on ME multiple

negation show that the effect which introducing *not* has on multiple negation is less direct than Rowlett (1998) proposes. The same morphosyntactic change which introduces *not* creates the conditions for a reanalysis of negative quantifiers which ultimately leads to the loss of multiple negation, but the introduction of *not* and loss of multiple negation do not proceed in parallel. Crucially, the reanalysis of negative quantifiers precipitated by Jespersen's Cycle is the starting point for competition between two types of negative quantifiers, which proceeds gradually throughout LME and Early Modern English. This process eliminates the dependencies between negative items which derive multiple negation, by eliminating lexical items which have the features necessary to appear in multiple negation. The elimination of multiple negation is modelled as a process of lexical competition between items which have contradictory features. Those items with features which enter into syntactic dependencies with other negative elements are eliminated by a process of simplification on the part of the language learner so that each PF expression of negation is also an LF expression of negation.

7.2.3 Implications for a Minimalist theory of grammaticalisation (Roberts and Roussou 2003)

The most recent large scale study of grammaticalisation and parametric change within a Minimalist framework is Roberts and Roussou (2003). My account of Jespersen's Cycle differs from theirs on a number of counts. Most significant is that I find a distinction between valued and unvalued features useful to account for the distribution of *ne* at successive stages of Jespersen's Cycle, and provide an account of Jespersen's Cycle as grammatical competition. Roberts and Roussou (2003) conceive of parametric variation as variation in the way pre-existing functional positions are phonologically realised, hence Jespersen's Cycle describes changes in the lexicalisation of two negation positions as *ne* and *not*. The two positions are in the same syntactic relation irrespective of whether or not they are lexicalised. The fact that both appear lexicalised in Middle English *ne...not* is an historical accident. Analysing Jespersen's Cycle as two changes in the phonological realisation of existing syntactic positions, as Roberts & Roussou do, predicts that the introduction of *not* and the loss of *ne* should be independent processes. It follows that Roberts & Roussou's structural changes should be adequately quantitatively modelled using Frisch's (1997) redundant licensing model. It also follows from Roberts and Roussou (2003) that language learners will acquire an

invariant syntactic structure irrespective of the morphological and syntactic evidence for that structure. My account of Jespersen's Cycle requires a dependency between *ne* and *not* as a precondition for the loss of *ne*. The process by which *ne* is lost makes a distinction between two types of *ne* involved in sentential negation. The innovation of a syntactic dependency between *ne* and *not* is crucial in order for the loss of *ne* to take place, as only then is *ne* redundant as a negative marker.

I argue that the dependency between *ne...not* is an innovation due to parametric change in the value of a polarity feature between valued [pol:neg] and unvalued [pol:]. It follows, contra Roberts and Roussou (2003), that this difference represents another way in which morphosyntactic features are parametrised. Roberts & Roussou's view of parametric variation as change restricted to morphological realisations does not allow this. My account is more economical within a bare phrase structure view, as structure is a consequence of syntactic dependencies, and syntactic dependencies only arise from the need to value unvalued features. Therefore, I propose a restricted theory of parametric variation which allows for change in syntactic structures. The relationship between variation in the value of features and syntactic structures follows from synchronic Minimalist proposals (Chomsky 1995; 2000) and is extended in my research to account for parametric change over time. I make use of the notion of simplicity in reanalysis, defining a simple grammar as one in which the language learner has a clear correspondence between LF and PF expressions of negation, no unvalued features and no syntactic dependencies. The loss of *ne* and the loss of multiple negation are examples of simplification. The loss of *ne* removes a redundant marker of negation. Loss of multiple negation follows from the loss of *ne*[pol:neg]: in clauses where negative arguments and adjuncts are the only negative, the simplest representation is to associate [pol:neg] with them at LF. Roberts and Roussou (2003) cannot appeal to the same ideas of simplicity as their LF representation of negation is invariant. For them, the valued-unvalued feature distinction is not parametrised.

All variation in the expression of negation in the history of English can be handled by two axes of variation affecting [neg] features: the way they combine with other morphosyntactic and morphophonological features in the lexicon, and their value as fully specified [pol:neg] or underspecified [pol:]. Reference to features takes primacy over reference to functional heads in this model. My analysis of multiple negation makes reference to [pol:neg] features on v^0 . The syntax of sentential negation is entirely consistent with this. If there is a NegP, it is a proxy projection (Nash and Rouveret 1997) which only appears at stage two of

Jespersen's Cycle to provide a specifier position for feature checking.

The unmarked most economical situation is to mark negation (or any other feature) morphologically on a functional head. In terms of pathways of change, elimination of underspecified or unvalued features reduces computational complexity, hence the creation of new morphology out of erstwhile independent syntactic items is favoured by the computational system. In contrast, the change from [pol:neg] to [pol:] is marked as it involves underspecification and the creation of new syntactic dependencies which are imperfections (Chomsky 1995; 2000). Therefore, the trigger for this change must be robust in the primary linguistic data. It may be a by-product of phonological weakening or of the lexical>functional reanalysis which secondary negators undergo in the string *ne...na* or *ne...nawiht*. Given the limitations of the textual record, it is impossible to know which of these factors caused the innovation of a new structure, or whether a combination of factors was responsible.

The same concept of markedness is relevant to linguistic change and synchronic syntax: underspecified [pol:] without a value in the lexicon is more marked than [pol:neg]. A perfect system would have no underspecified or unvalued features. Chomsky (1995; 2000) has shown that synchronic syntax works to eliminate unvalued features which are defective at the interfaces and prevent convergence. It is natural to propose that the same simplicity metric is at work for the language learner, leading to the elimination of unvalued features except where these are strongly evidenced by overt syntactic dependencies. Loss of *ne* [pol:] seems to initiate another process of grammar competition between adverbial or specifier *not* and head *not* in Early Modern English, a detailed examination of which is outside the scope of this thesis.

7.3 Minimalism and the representation of sentential negation

7.3.1 The Neg-criterion reduced to a feature checking dependency

I show that changes to negation can be accommodated using theoretical devices from the Minimalist framework (Chomsky 1995; 2000). I make extensive use of morphosyntactic features, arguing that negation is a morphosyntactic feature, subject to the same syntactic constraints as other morphosyntactic features. This

is not a new idea: I follow Rowlett (1998), Kato (2001), Roberts and Roussou (2003) in making this claim. This approach has syntactic implications, as observed by Rowlett (1998). It eliminates the Neg-criterion (Haegeman 1995), which is no longer formulable as a universal condition on negation. Instead, the effects of the Neg-criterion are derived by a morphosyntactic feature checking dependency between the unvalued feature of a head and the matching valued feature of a specifier. The Neg-criterion is not universal, applying in just those cases where unvalued polarity features are present on a head, in just the same way as feature checking applies when other types of unvalued features are present. The scope of negation is not determined by the Neg-criterion but by the position of [neg] in the structure. [neg] takes scope over all that it C-commands.

The Neg-criterion is relativised to a feature checking configuration, not a universal requirement of the grammar or of interpretation at LF. This simplifies the grammar and reduces the need for null operators. Relativising the Neg-criterion to a particular feature checking configuration requires no stipulations or special status for the criterion. It arises out of a general configurational requirement on feature checking used throughout the syntax (for example for phi-feature agreement on subjects or objects).

7.3.2 A feature based analysis of negation and NegP

A feature based analysis of negation has implications for the structural representation of negation as head of NegP. A [pol:neg] feature can be part of the feature specification of some other functional head, such as v^0 , rather than projecting as a head itself. When the sole expression of negation is a prefix *ne* on the finite verb, there is no syntactic evidence for a separate projection which is associated with the [pol:neg] feature. Postulation of NegP with *ne* as its head, for this stage of the language, is an analytical decision which must be made based on the theoretical framework. There are two opposed views of projection in the Minimalist literature. First, the 'distributed morphology' view (Halle and Marantz 1993, Bobaljik 1995, Bobaljik and Thrainsson 1998), in which each morpheme projects to a syntactic head. Second, a 'morphology in the lexicon' view (Chomsky 1995; 2000), in which each lexical item emerges from the lexicon fully inflected with its morphology. In this approach, the syntax only does feature checking by Merge or Move, and syntactic structure is only built up through feature checking operations. Hence when the polarity feature does not enter into a checking relation, no

polarity phrase (PolP) or negative phrase (NegP) is projected. This is the more minimal approach, as it removes processes of morphological cliticisation from the syntactic computation. Either approach is empirically justified in respect of unsupported *ne* in Old and Middle English. However, there is evidence that Old and Middle English are languages in which morphemes project to syntactic heads for feature-checking purposes. The existence of tense and agreement morphology correlates with two syntactic positions for subjects (Bobaljik and Thrainsson 1998). Haerberli (2002b) uses this fact to explain differences in the position of pronoun and full NP subjects in relation to finite verbs in Old and Middle English main clauses. The question relevant to negation is whether there is any comparable syntactic evidence for NegP; distributional facts concerning negation which cannot be explained without reference to NegP, similar to the Old English distribution of subjects which is usefully analysed with reference to AgrP. Does the feature checking relation holding between an unvalued [pol:] feature and a matching [pol: neg] specifier require PolP? In principle it does not. Chomsky (1995; 2000) adopts bare phrase structure, rejecting the X'-theoretic approach to phrase structure which held in Government-Binding theory. Under X'-theory, the existence of a specifier entailed the existence of a distinct syntactic head. Chomsky (1995; 2000) argues that heads may have multiple specifiers, one for each of the unvalued features of the head which must be valued locally by (re-)Merge. The position available to Middle English *not* is consistent with the outer specifier position of vP. Chomsky (1999) argues that vP has an inner A-specifier, and an outer A'-specifier. Therefore, it is possible to eliminate NegP.

7.4 Outstanding issues and problems

The most significant outstanding issues are Early Modern English changes to multiple and sentential negation. Examination of this period will confirm or refute my hypothesis concerning the relationship between multiple negation and Jespersen's Cycle, as well as allowing me to address the development of negative auxiliaries and the loss of multiple negation in more detail. As it stands, the account of Jespersen's Cycle is not complete. The development of negative auxiliaries at stage four of Jespersen's Cycle will require the relationship between negation and modality to be considered. Changes in negation interact with the development of a class of modal verbs, and the introduction of periphrastic *do*.

7.4.1 Further issues relating to Jespersen's Cycle

The discussion of Jespersen's Cycle I presented here is not exhaustive. It focuses on providing an account of Jespersen's Cycle within a particular set of assumptions concerning syntactic structure and language change, and validating this account using quantitative data. Further empirical work on the progress of Jespersen's Cycle will uncover a wider range of factors and constraints on the grammaticalisation of *not*, which will advance understanding of the motivation and processes involved in grammaticalisation and diffusion of *not*. A detailed examination of the development of *not* as a sentential negator in Old and Early Middle English and the changes in its distribution at this period will shed some light on the means by which *not* goes from an adjunct to a sentential negator. I expect that a much wider range of contextual factors condition the use and diffusion of *not* in Middle English, such as modality or force, or differences between stative or active verbs. Extralinguistic factors, such as dialect or register may be relevant. The data will be coded for these factors to produce a more articulated account of the progress of Jespersen's Cycle.

This work will need to rely heavily on statistical tools such as multivariate analysis and logistic regression. The present work makes clear the potential for variability within Jespersen's Cycle and the need to establish the effect of each factor on this variability independently of the others. This will show how the sentential negator *not* advances through a real time corpus of linguistic data, and will establish whether the Constant Rate Effect holds throughout the contexts using statistical evidence. Linguistic factors will be the easiest to isolate, but extralinguistic factors should also be considered. These are harder to ascertain for historical texts.

Another important area in research on Early English is the effect of language contact in the broadest sense. Many Old English texts are translations of Latin originals or have Latin sources as models. In order to assess the extent to which the Old English data represent the vernacular English situation, it is necessary to establish and isolate any effect that Latin may be having on the patterns found in certain texts. Taylor (2005) has shown a translation effect of Latin upon Old English, but has also demonstrated that the effect is not straightforward or predictable. Detailed comparison of Old English translations and Latin originals is required to see whether Latin negation has any effect on the patterns found in Old English. This is particularly relevant for texts such as the Old English *Bede*, which exhibit different patterns of negation to contemporaneous texts. This is an

attempt to disentangle scribal practice from actual language use. Actual language use may be less homogeneous than the written data make the situation appear. The effect of language contact with Scandinavian languages in areas of settlement in the north and east may have linguistic effects on negation strategies. Ingham (2004) makes some remarks on the dialectal distribution of patterns of negation which require further investigation to confirm. Old Norse undergoes Jespersen's Cycle prior to the change in English (see Eythorsson (2002) for a discussion of negation in Old Norse). Therefore, contact with Old Norse may promote Jespersen's Cycle in English, in much the same way that it contributed to changes in agreement morphology in eastern dialects of Middle English (Samuels 1972). Patterns of migration and dialect levelling within England may also be relevant to the diffusion of changes in negation strategies. The Middle English dialect data are too sparse to facilitate analysis of these factors in detail, but some aspects of variation may emerge from detailed examination of Early Modern English data, from which patterns of variation in Middle English might be extrapolated.

7.4.2 The relationship between Jespersen's Cycle and multiple negation

In chapter 6 and section 7.2.2 of this chapter I proposed a particular relationship between Jespersen's Cycle and multiple negation. I speculated that this relationship has the following consequences:

1. *Not* is introduced in the same way in multiple negation as in other contexts.
2. The introduction of *not* has no effect on the availability of multiple negation.
3. Multiple negation is lost through a change in the morphosyntactic features of a particular set of quantifiers (those licensed by negation in Old and Middle English), and bears no direct syntactic relation to the introduction of secondary negators (*not*) under Jespersen's Cycle as Rowlett (1998) proposes.
4. Morphosyntactic feature change affecting *ne* is crucial in creating the conditions for changes in multiple negation strategies, leading to a reanalysis of concordant negative arguments and adjuncts with the feature [pol:], which were previously licensed by Agree with *ne* [pol:neg], as self-licensing negative quantifiers, themselves with the feature [pol:neg]. This leads to the loss of multiple negation. The loss of multiple negation arises because of

the loss of Agreement relations between negatives, whether between a negative marker and a negative argument or adjunct (negative doubling) or between two or more negative arguments and adjuncts (negative spread).

However, I observed that Middle English offers insufficiently variable use of multiple negation to examine variation and change in multiple negation strategies. This will be possible with corpora of Early Modern English data covering the period in which multiple negation is actually lost from the standard language.

A real time, diachronic perspective on the loss of multiple negation in Early Modern English will establish the exact nature of the parametric difference between Middle English, which has multiple negation, and Modern Standard English, which does not, whilst taking account of the behaviour of non-standard dialects which retain multiple negation. The aim is similar to synchronic studies of parametric variation across related dialects, but the dialects in question are related in both space and time. I will seek an approach to the loss of multiple negation which clarifies its relation to Jespersen's Cycle as I have analysed it here. In parametric terms, the question is whether either of the changes involved in Jespersen's Cycle and the loss of multiple negation are related directly as aspects of the same parametric changes, indirectly in some way yet to be worked out, or whether multiple negation is completely independent of Jespersen's Cycle. Typologically, Rowlett (1998) observes that languages with a negative head are typically those with multiple negation. His formalisation of this observation does not fit the early English data well, but that does not mean that I should abandon his observation. There should be another way to formulate the correspondence Rowlett observes which is compatible with the early English situation, and explains why early English is typologically odd in having negative spread for a time.

Examination of Early Modern English corpora will enable me to use quantitative and statistical observations to relate change in sentential negation strategies and the loss of multiple negation. This will enhance understanding of the motivation for, and factors involved in the loss of multiple negation. In particular, I will establish whether Jespersen's Cycle is one of the factors involved in the loss of multiple negation. The challenge in accounting for multiple negation strategies is to parametrise all the changes involved in a way which derives all the patterns of variation found in Early Modern English data, within the restricted theory of parametric change I outline in this thesis, and which makes parametric changes the products of reanalyses during the process of language acquisition.

The hypothesis that multiple negation is lost due to lexical ambiguity between concordant negatives and negative quantifiers has not been fully tested yet. I hypothesize that concordant negatives and negative quantifiers are in competition. At the present time, it is not clear which parameters compete to eradicate multiple negation and how many processes of change are involved, let alone how the competition begins, or the factors which promote the loss of multiple negation in the standard language. Standard and non-standard dialects diverge. The lack of multiple negation becomes a marker of the standard language.

In accounting for the loss of multiple negation, work remains to establish the role of linguistic change and extralinguistic factors such as the evaluation of variants and their significance within the speech community. This requires detailed study of the effect of linguistic and extralinguistic constraints using statistical tools such as multivariate analysis to compensate for uneven data distribution in the written historical record. Nevalainen (1996) provides evidence for the social evaluation of multiple negation and the role of sociolinguistic factors in its loss. However, little work has been done on the role of linguistic factors, dialect or register variation or the interaction between a full range of factors. Detailed examination of these factors will inform the way the loss of multiple negation is modelled in the grammatical competition model, and even whether the grammatical competition model is appropriate. I am also aware that the factors relevant to variation between multiple negation and non-multiple negation may change over time as language users re-evaluate the variants. Nevalainen (1996) demonstrates that the social significance of multiple negation changes as the demographics of its use change in the 16th century. It becomes a marker of social rank during this period.

In chapter 6, I proposed that variable use of multiple negation strategies involving *not* gives rise to the observed PDE variation between *no*-negation and *not*-negation (Tottie 1991). An extension of Tottie's research to Early Modern English will clearly show whether this hypothesis is correct or not. I predict that Early Modern English multiple negation involves two changes: a generalisation of *not* into contexts where it was previously absent, and the replacement of *n*-words with negative polarity items (*any*-). The intersection of these two changes provides the conditions for variation between *not*-negation and *no*-negation.

7.4.3 The development of negative auxiliaries

Examination of Early Modern English sentential negation strategies should reveal some changes to negation which are contingent on changes in clause structure, on the loss of verb movement and on the development of modal auxiliaries. The development of a class of modal verbs, and the emergence of periphrastic *do* in the Early Modern English period affect the representation of negation in Early Modern English. The work I have already done on the earlier history of negation might shed some light on the interaction of negation and modality and reasons for the development of negative auxiliary verbs. Zwicky and Pullum (1983) propose that auxiliary verbs are inflected for negation in the lexicon rather than formed by cliticisation of the finite verb and *not* in the syntax. There has been no lack of literature on the development of a class of modal verbs and especially concerning the development of periphrastic *do*, but few accounts have examined the interaction between the development of modal verbs and changes to the syntax of negation. Further work is needed to establish the process and motivation by which *not* loses its syntactic independence in Early Modern English, and why it becomes associated with a particular subset of verbs, the modal auxiliaries. The development of a class of modals, and the loss of V to T movement with lexical verbs are both necessary conditions for the development of negative auxiliaries.

7.5 Summary of conclusions

This thesis has demonstrated the value of large scale research over a long timespan using syntactically parsed corpora and an approach which integrates quantitative methodology, textual analysis and Minimalist syntactic theory. I provide a more constrained view of parametric variation in negation than previous accounts, advancing empirical evidence for the Minimalist idea that parametric variation is lexically based variation in the distribution and value of morphosyntactic features as well as the morphological realisation of these features. This view of parametric variation is more complex than Roberts and Roussou (2003), but has the advantage of clarifying the relationships between changes in early English negation, in particular those which go to make up Jespersen's Cycle. This view of parametric variation allows a simple account of Jespersen's Cycle as grammatical competition. It also has the (synchronic and diachronic) benefit of simplifying the representation of negation in early English, reducing the num-

ber of null elements and syntactic dependencies involved in the representation of negation. This has the consequence of making negation strategies more learnable on the basis of overt morphological evidence. Finally, I show that quantitative data are crucial in making sense of the relationships between changing patterns of negation in early English and informing an appropriate syntactic analysis.

Appendix A

Texts and Editions included in the York-Toronto-Helsinki Parsed Corpus of Old English Prose

The York-Toronto-Helsinki Parsed Corpus of Old English Prose (Taylor et al. 2003) comprises the following texts. I split the data into three broad chronological periods according to the manuscript dates given in Ker (1957). Only one manuscript version of each text is included. All this information is taken from the YCOE documentation, available with the corpus through the Oxford Text Archive.

A.1 Pre-950

- **Bede's Ecclesiastical History of the English Church and People Preface, Headings, Books 1 and 2 (COBEDE.O2)**
Miller, Thomas. 1959-1963 (1890-1898). The Old English Version of "Bede's Ecclesiastical History of the English People". EETS 95, 96, 110, 111. London: OUP.
- **Boethius, Consolation of Philosophy (COBOETH.O2)**
Sedgefield, Walter John. 1899. King Alfred's Old English Version of Boethius de Consolatione Philosophiae. Oxford: Clarendon Press. Reprinted Darmstadt 1968.
- **Gregory's Pastoral Care Chapters 1-39 (COCURA.O2)**

- Sweet, Henry. 1958 (1871). *King Alfred's West-Saxon Version of Gregory's Pastoral Care*. EETS 45, 50. London: OUP. ¹
- **Gregory's Pastoral Care Chapters 1-39 (COCURAC)**
Sweet, Henry. 1958 (1871). *King Alfred's West-Saxon Version of Gregory's Pastoral Care*. EETS 45, 50. London: OUP. ²
 - **Charters and Wills (CODOCU1.01)**
(1) Harmer, F.E. 1914. *Select English Historical Documents of the Ninth and Tenth Centuries*. Cambridge: CUP.
(2) Robertson, A.J. 1956 (1939). *Anglo-Saxon Charters*. Cambridge: CUP.
 - **Charters and Wills (CODOCU2.012)**
Robertson, A.J. 1956 (1939). *Anglo-Saxon Charters*. Cambridge: CUP.
 - **Charters and Wills (CODOCU2.02)**
(1) Harmer, F.E. 1914. *Select English Historical Documents of the Ninth and Tenth Centuries*. Cambridge: CUP.
(2) Robertson, A.J. 1956 (1939). *Anglo-Saxon Charters*. Cambridge: CUP.
 - **Bald's Leechbook (COLAECE.02)**
Cockayne, Oswald. 1864-1866. *Leechdoms, Wortcunning and Starcraft of Early England*. Rolls Series 35, vol. 1. 70-324. London: Her Majesty's Stationery Office. Reprinted Wiesbaden, Germany: Kraus Reprint Ltd. 1965.
 - **Laws of Alfred (COLAWAF.02)**
Lieberman, F. 1903-16. *Die Gesetze der Angelsachsen*. Halle. Reprinted Aalen 1960.
 - **Alfred's Introduction to Laws (COLAWAFINT.02)**
Lieberman, F. 1903-16. *Die Gesetze der Angelsachsen*. Halle. Reprinted Aalen 1960.
 - **Laws of Ine (COLAWINE.OX2)**
Lieberman, F. 1903-16. *Die Gesetze der Angelsachsen*. Halle. Reprinted Aalen 1960.

¹Defective section 33 replaced by Cotton Tiberius B.XI, see cocuraC

²Replaces defective section 33 in Hatton 20

- **Orosius Books 2 and 3 (COOROSIU.O2)**
Bately, Janet. 1980. *The Old English Orosius*. EETS s.s. 6. London: Oxford University Press.
- **Preface to Cura Pastoralis (COPREFCURA.O2)**
Sweet, Henry. 1958 (1871). *King Alfred's West-Saxon Version of Gregory's Pastoral Care*. EETS 45, 50: 3-9. London: OUP.

A.2 950-1050

- **Ælfric's Supplemental Homilies (COAELHOM.O3)**
Pope, J.C. 1968. *Homilies of Ælfric, A supplementary Collection*. Early English Text Society, 260. London: OUP.
- **Ælfric's Catholic Homilies I (COAELIVE.O3)**
Clemoes, P. 1997. *Ælfric's Catholic Homilies: The First Series*. EETS s.s. 17: 174-77. Oxford: Oxford University Press.
- **Alexander's Letter to Aristotle (COALEX.O23)**
Orchard, Andrew P.M. 1995. *Pride and Prodigies: Studies in the Monsters of the "Beowulf" Manuscript*. Pp. 224-52. Cambridge: D.S. Brewer.
- **Apollonius of Tyre (COAPOLLO.O3)**
Goolden, Peter. 1958. *The Old English "Apollonius of Tyre"*. London: OUP.
- **The Benedictine Rule (BENRUL.O3)**
Schröer, Arnold. 1885-1888. *Die angels ächsischen Prosabearbeitungen der Benediktinerregel*. Bibliothek der Angels ächsischen Prosa, II. Kassel. Reprinted with appendix by H. Gneuss (Darmstadt 1964).
- **The Blickling Homilies (COBLICK.O23)**
Morris, Richard. 1967 (1874-1880). *The Blickling Homilies*. EETS 58, 63, 73. London: Trübner
- **Byrhtferth's Manual (COBYRHTF.O3)**
Baker, Peter S. and Michael Lapidge 1995. *Byrhtferth's Enchiridion*. EETS s.s. 15. Oxford: OUP. Sample, pp. 1-74

- **Ælfric's Catholic Homilies I (COCATHOM1.O3)**
Clemoes, P. 1997. *Ælfric's Catholic Homilies: The First Series*. EETS s.s. 17. Oxford: OUP.
- **Ælfric's Catholic Homilies II (COCATHOM2.O3)**
Godden, M. 1979. *Ælfric's Catholic Homilies: The Second Series*. EETS s.s. 5. London: OUP.
- **Saint Christopher (COCHRISTOPH)**
Rypins, Stanley. 1971 (1924). *Three Old English Prose Texts in Ms. Cotton Vitellius A.XV*. EETS 161. London: OUP.
- **Anglo-Saxon Chronicle A (COCHRONA.O23)**
Plummer, Charles. 1965 (1892-1899). *Two of the Saxon Chronicles Parallel*. Oxford: Clarendon Press. Reissued D. Whitelock, Oxford 1952.³
- **Charters and Wills (CODOCU3.O23)**
(1) Harmer, F.E. 1914. *Select English Historical Documents of the Ninth and Tenth Centuries*. Cambridge: CUP.
(2) Robertson, A.J. 1956 (1939). *Anglo-Saxon Charters*. Cambridge: CUP.
- **Ælfric's Epilogue to Genesis (COEPIGEN.O3)**
Crawford, Samuel J. 1922. *The Old English Version of the Heptateuch. Ælfric's Treatise on the Old and New Testament and His Preface to Genesis*. EETS 160: 333-76. London: OUP.
- **Saint Euphrosyne (COEUPHR)**
Skeat, Walter William. 1966 (1881-1900). *Ælfric's Lives of Saints*. EETS 76, 82, 94, 114: 334-54. London: OUP.
- **Saint Eustace and his Companions (COEUST)**
Skeat, Walter William. 1966 (1881-1900). *Ælfric's Lives of Saints*. EETS 76, 82, 94, 114: 190-218. London: OUP.

³Attached to the filename within the ID is an indication of scribe, where *cochronA-1* indicates scribe 1, *cochronA-8a* indicates scribe 8a, etc. Bately 1986: xxi-xliii (*The Anglo-Saxon Chronicle: A Collaborative Edition*) was used as the source for information about and identification of the scribes. Note that CorpusSearch treats each scribe as a separate text and computes the statistics appropriately.

- **Gregory's Dialogues (Ms. H) (COGREGDH.O23)**
Hecht, Hans. 1965 (1900-1907). Bischof W ærferth von Worcester Übersetzung der Dialoge Gregors des Grossen. Bibliothek der Angelsaechsischen Prosa, V. Darmstadt: Wissenschaftliche Buchgesellschaft.
- **Lacnunga (COLACNU.O23)**
Grattan, John Henry Grafton and Charles Singer, eds. 1952. Anglo-Saxon Magic and Medicine. Publications of the Wellcome Historical Medical Museum n.s. 3. London: OUP.
- **Laws of Cnut I (COLAW1CN.O3)**
Lieberman, F. 1903-16. Die Gesetze der Angelsachsen. Halle. Reprinted Aalen 1960.
- **Laws of Cnut II (COLAW2CN.O3)**
Lieberman, F. 1903-16. Die Gesetze der Angelsachsen. Halle. Reprinted Aalen 1960. F. Lieberman, 308-70 Die Gesetze der Angelsachsen, Halle 1903-16 [Aalen 1960]
- **Laws of Æthelred V (COLAW5ATR.O3)**
Lieberman, F. 1903-16. Die Gesetze der Angelsachsen. Halle. Reprinted Aalen 1960. F. Lieberman, 236-46 Die Gesetze der Angelsachsen, Halle 1903-16 [Aalen 1960]
- **Laws of Æthelred VI (COLAW6ATR.O3)**
F. Lieberman, 246-58 Die Gesetze der Angelsachsen, Halle 1903-16 [Aalen 1960]
- **Northumbra Preosta Lagu (COLAWNORTHU.O3)**
Lieberman, F. 1903-16. Die Gesetze der Angelsachsen. Halle. Reprinted Aalen 1960.
- **Ælfric's Letter to Sigefyrth (COLSIGEF.O3)**
Assmann, Bruno. 1889. Angelsaechsische Homilien und Heiligenleben. Bibliothek der Angelsaechsischen Prosa, III. Kassel: Wissenschaftliche Buchgesellschaft. Reprinted with an introduction by P. Clemoes, Darmstadt 1964.
- **Ælfric's First Letter to Wulfstan (COLWSTAN1.O3)**
Fehr, B. 1914. Die Hirtenbriefe Aelfrics in Altenglischer und Lateinischer Fassung. Bibliothek der Angelsaechsischen Prosa, IX: 68-145. Hamburg:

Verlag von Henri Grand. Reprinted with a supplement by P. Clemoes, Darmstadt 1966.

- **Ælfric's Second Letter to Wulfstan (COLWSTAN2.O3)**
Fehr, B. 1914. Die Hirtenbriefe Aelfrics in Altenglischer und Lateinischer Fassung. Bibliothek der Angelsaechsischen Prosa, IX: 68-145. Hamburg: Verlag von Henri Grand. Reprinted with a supplement by P. Clemoes, Darmstadt 1966.
- **Ælfric's Letter to Wulfgeat (COLWGEAT)**
Assmann, Bruno. 1889. Angelsaechsische Homilien und Heiligenleben. Bibliothek der Angelsaechsischen Prosa, III. Kassel: Wissenschaftliche Buchgesellschaft. Reprinted with an introduction by P. Clemoes, Darmstadt 1964.
- **The Old English Martyrology (COMART1, COMART2, COMART3.O23)**
Herzfeld, George. 1973 (1900). An Old English Martyrology. EETS 116: 2-10. London: Trübner. Corrected by Kotzor, G. 1981. Das Altenglische Martyrologium, vol. II. Bayerische Akademie der Wissenschaften, Philosophisch-Historische Klasse. Abhandlung, Neue Folge, Heft 88/2. München: Verlag der Bayerischen Akademie der Wissenschaften.
- **comarvel.o23 (MARVELS OF THE EAST)**
Orchard, Andrew P.M. 1995. Pride and Prodigies: Studies in the Monsters of the "Beowulf" Manuscript. Pp. 184-202. Cambridge: D.S. Brewer.
- **Mary of Egypt (COMARY)**
Skeat, Walter William. 1966 (1881-1900). Ælfric's Lives of Saints. EETS 76, 82, 94, 114: 2-52. London: OUP.
- **The Heptateuch Genesis and Exodus (COOTEST.O3)**
Crawford, Samuel J. 1922. The Old English Version of the Heptateuch. Ælfric's Treatise on the Old and New Testament and His Preface to Genesis. EETS 160. London: Oxford University Press. Reprinted with additions by N.R. Ker 1969.
- **Ælfric's Preface to Catholic Homilies I (COPREFCATH1.O3)**
Clemoes, P. 1997. Ælfric's Catholic Homilies: The First Series. EETS s.s. 17: 174-77. Oxford: OUP.

- **Ælfric's Preface to Catholic Homilies II (COPREFCATH2.O3)**
Godden, M. 1979. *Ælfric's Catholic Homilies: The Second Series*. EETS s.s. 5: 1-2. London: OUP.
- **Ælfric's Preface to Genesis (COPREFGEN)**
Crawford, Samuel J. 1922. *The Old English Version of the Heptateuch. Ælfric's Treatise on the Old and New Testament and His Preface to Genesis*. EETS 160: 76-80. London: OUP. Reprinted with additions by N.R. Ker 1969.
- **Ælfric's Lives of Saints (COPREFLIVES.O3)**
Skeat, Walter William. 1966 (1881-1900). *Ælfric's Lives of Saints*. EETS 76, 82, 94, 114: 4-6. London: Oxford University Press.
- **Quadrupedibus (COQUADRU.O23)**
de Vriend, Hubert Jan. 1984. *The Old English Herbarium and Medicina de quadrupedibus*. EETS 286: 234-73. London: OUP.
- **The Seven Sleepers (COSEVENSL)**
Magennis, Hugh 1994. *The Anonymous Old English Legend of the Seven Sleepers*. Durham Medieval Texts 7. Durham.
- **Solomon and Saturn II (COSOLSAT2)**
Menner, Robert J. 1941. *The Poetical Dialogues of Solomon and Saturn*. MLA Monograph Series 13: 168-71. New York: The Modern Language Association of America.
- **De Temporibus Anni (COTEMPO.O3)**
Henel, Heinrich. 1970 (1942). *Ælfric's De Temporibus Anni*. EETS 213. London: OUP
- **The Vercelli Homilies (COVERHOM)**
Scragg, D.G. 1992. *The Vercelli Homilies and Related Texts*. EETS 300. Oxford: OUP.
- **The West-Saxon Gospels Matthew (COWSGOSP.O3)**
Skeat, Walter William. 1871-1887. *The Four Gospels in Anglo-Saxon, Northumbrian and Old Mercian Versions*. Cambridge: Cambridge University Press. Reprinted Darmstadt 1970.

A.3 1050-1150

- **Adrian and Ritheus (COADRIAN.O34)**
Cross, James E. and Thomas D. Hill. 1982. The "Prose Solomon and Saturn" and "Adrian and Ritheus". Toronto, Buffalo, London: University of Toronto Press.
- **Alcuin's De Virtutibus et Vitiis (COALCUIN)**
Warner, Rubie D.-N. 1917 (1971). Early English Homilies from the 12th Century Ms. Vespasian D.XIV. EETS 152. London: Trübner.
- **Augustine's Soliloquies (COAUGUST)**
Warner, Rubie D.-N. 1917 (1971). Early English Homilies from the 12th Century Ms. Vespasian D.XIV. EETS 152. P.65. London: Trübner. [repr. 1971]
- **Chrodegang's Rule (COCHDRUL)**
Napier, Arthur S. 1971 (1916). The Old English Version, with the Latin Original, of the Enlarged Rule of Chrodegang together with the Latin Original. EETS 150. London: Kegan Paul, Trench, Trübner & Co., Ltd. and OUP.
- **Canons of Edgar (COCANEDGX)**
Fowler, Roger. 1972. Wulfstan's Canons of Edgar. EETS 266. London: OUP.
- **Other Saints' Lives, The Life of Saint Chad (COCHAD.O24)**
Vleeskruyer, Rudolf. 1953. The Life of Saint Chad: An Old English Homily. Amsterdam: North-Holland.
- **Distichs of Cato (CODICTS.O34)**
Cox, R.S. 1972. "The Old English Dicts of Cato." *Anglia* 90:1-42. Tübingen: Max Niemeyer.
- **Charters and Wills (CODOCU3.O3)**
(1) Robertson, A.J. 1956 (1939). Anglo-Saxon Charters. Cambridge: CUP.
(2) Whitelock, Dorothy. 1930. Anglo-Saxon Wills. Cambridge: CUP.
- **Charters and Wills (CODOCU4.O24)**
Robertson, A.J. 1956 (1939). Anglo-Saxon Charters. Cambridge: CUP.
- **Honorius of Autun, Elucidarium (COELUC1)**

- Warner, Rubie D.-N. 1917 (1971). *Early English Homilies from the 12th Century Ms. Vespasian D.XIV. EETS 152: 140–3*. London: Trübner. ⁴
- **Gregory's Dialogues (Ms. C) Books 1 and 2 (COGREGDC.O24)**
Hecht, Hans. 1965 (1900-1907). *Bischof Wærferth von Worcester übersetzung der Dialoge Gregors des Grossen*. Bibliothek der Angelsaechsischen Prosa, V. Darmstadt: Wissenschaftliche Buchgesellschaft.
 - **Herbarium (COHERBAR)**
de Vriend, Hubert Jan. 1984. *The Old English Herbarium and Medicina de quadrupedibus*. EETS 286:30–233. London: OUP.
 - **Institutes of Polity (COINSPOLX)**
Jost, K. 1959. "Die 'Institutes of Polity, Civil and Ecclesiastical.'" *Swiss Studies in English* 47. Bern.
 - **James the Greater (COJAMES)**
Warner, Rubie D.-N. 1917 (1971). *Early English Homilies from the 12th Century Ms. Vespasian D.XIV. EETS 152: 21–5*. London: Trübner.
 - **Gerefa (COLAWGER.O34)**
Lieberman, F. 1903-16. *Die Gesetze der Angelsachsen*. Halle. Reprinted Aalen 1960.
 - **Laws of William (COLAWWLLAD.O4)**
Lieberman, F. 1903-16. *Die Gesetze der Angelsachsen*. Halle. Reprinted Aalen 1960.
 - **Vision of Leofric (COLEOFRI.O4)**
Napier, Arthur S. 1907-10. "An Old English Vision of Leofric, Earl of Mercia". *Transactions of the Philological Society*: 180–88.
 - **Ælfric's Letter to Sigeward (Z) (COLSIGEWZ)**
Crawford, Samuel J. 1922. *The Old English Version of the Heptateuch. Ælfric's Treatise on the Old and New Testament and His Preface to Genesis*. EETS 160: 18–33, 39–51. London: OUP. Reprinted with additions by N.R. Ker 1969.

⁴This text is included in the PPCME2 as part of the Kentish Homilies (cmkenthom1)

- **Ælfric's Letter to Wulfsige (COLWSIGEXA.O34)**
Fehr, B. 1914. Die Hirtenbriefe Aelfrics in Altenglischer und Lateinischer Fassung. Bibliothek der Angelsaechsischen Prosa, IX: 1-34. Hamburg: Verlag von Henri Grand. Reprinted with a supplement by P. Clemoes, Darmstadt 1966
- **Saint Margaret (COMARGAC.O34)**
Clayton, Mary and Hugh Magennis. 1994, "The Old English Lives of St Margaret." Cambridge Studies in Anglo-Saxon England 9:152-70. Cambridge: CUP.
- **Saint Neot (CONEOT)**
Warner, Rubie D.-N. 1917 (1971). Early English Homilies from the 12th Century Ms. Vespasian D.XIV. EETS 152: 129-34. London: Trübner.
- **The Gospel of Nichodemus (CONICODA)**
Cross, J.E. 1996. Two Old English Apocrypha and Their Manuscript Source: The Gospel of Nichodemus and The Avenging of the Saviour, with contributions by Denis Brearley, Julia Crick, Thomas Hall and Andy Orchard. Cambridge Studies in Anglo-Saxon England 19: 139-247. Cambridge: CUP.
- **Preface to St Augustine's Soliloquies (COPREFSOLILO)**
Endter, W. 1922. König Alfreds des Grossen Bearbeitung der Soliloquien des Augustinus. Bibliothek der Angelsaechsischen Prosa, 11: 1-2. Darmstadt: Wissenschaftliche Buchgesellschaft. Reprinted Darmstadt 1964. Corrections by Carnicelli, T.A. 1969. King Alfred's Version of St. Augustine's Soliloquies. Cambridge, MA: Harvard University Press.
- **The History of the Holy Rood-Tree (COROOD)**
Napier, Arthur S. 1973 (1894). History of the Holy Rood Tree. EETS 103. London: Kegan Paul, Trench, Trübner & Co.
- **St Augustine's Soliloquies (COSOLILO)**
Endter, W. 1922. König Alfreds des Grossen Bearbeitung der Soliloquien des Augustinus. Bibliothek der Angelsaechsischen Prosa, 11. Darmstadt: Wissenschaftliche Buchgesellschaft. Reprinted Darmstadt 1964. Corrections by Carnicelli, T.A. 1969. King Alfred's Version of St. Augustine's Soliloquies. Cambridge, MA: Harvard University Press.

- **Solomon and Saturn I (COSOLSAT1.OX4)**
Cross, James E. and Thomas D. Hill. 1982. The "Prose Solomon and Saturn" and "Adrian and Ritheus". Pp. 25-34. Toronto, Buffalo, London: University of Toronto Press.
- **The Martyrdom of Saint Vincent (2nd half) (COVINCEB)**
Irvine, Susan. 1993. Old English Homilies from Ms Bodley 343. EETS 302. Oxford: OUP.⁵
- **Vindicta Salvatoris (COVINSAL)**
Cross, J.E. 1996. Two Old English Apocrypha and Their Manuscript Source: The Gospel of Nichodemus and The Avenging of the Saviour, with contributions by Denis Brearley, Julia Crick, Thomas Hall and Andy Orchard. Cambridge Studies in Anglo-Saxon England 19: 249-93. Cambridge: CUP.
- **The Homilies of Wulfstan (COWULF.O34)**
Bethurum, Dorothy. 1957. The Homilies of Wulfstan. Oxford: Clarendon Press.

⁵Although included in B1.3.35 with the part of The Martyrdom of Saint Vincent found in Skeat (1881-1900), this part of the text is from a different manuscript

Appendix B

Texts and Editions included in the Penn-Helsinki Parsed Corpus of Middle English (2nd edition)

The second edition of the Penn-Helsinki Parsed Corpus of Middle English (Kroch and Taylor 2000a) is subdivided into four time periods. The texts included in the corpus and the editions used are as follows. I have categorised texts by the date of the manuscript edition used rather than the supposed date of composition. The *Ormulum* is not listed, as I did not include it in the analysis.

All this information is taken from the PPCME2 documentation, available at <http://www.ling.upenn.edu/mideng/>

M1: 1150-1250

- **Kentish Homilies (CMKENTHO)**
Warner, R.D.-N., *Early English Homilies from the Twelfth-Century MS. Vespasian D xiv, EETS OS 152* (New York, 1917 for 1915; repr. 1971), pp. 134-139, 140-145.
- **The Peterborough Chronicle (CMPETERB)**
Clark, Cecily, *The Peterborough Chronicle 1070-1154, 2nd edn* (Oxford, 1970), pp. 41-60.
- **Ancrene Riwe (CMANCRIW)**

Ackerman, Robert W. and Roger Dahood, *Ancrene Riwe: Introduction and Part I, Medieval and Renaissance Texts and Studies* (Birmingham, 1972); Dobson, E.J., *The English Text of the Ancrene Riwe edited from B.M. Cotton MS. Cleopatra C VI, EETS OS 267* (London, 1972). The Introduction and Part I are taken from Ackerman and Dahood, an edited text based on the Cotton Cleopatra manuscript. The rest of the sample is taken from the diplomatic edition of Dobson (pp. 39-246).

- **The Katherine Group**

This group includes the following texts: **Hali Meidhad (CMHALI)**, **St Katherine (CMKATHE)**, **St Juliana (CMJULIA)**, **St Margaret (CMMARGA)**, **Sawles Warde (CMSAWLES)**.

d'Ardenne, S.R.T.O., *The Katherine Group Edited from MS Bodley 34*. (Paris, 1977)

- **The Lambeth Homilies (CMLAMB1, CMLAMBX1)**

Morris, Richard, *Old English Homilies I, EETS OS 29 & 34*, (New York, 1969).

- **Vices and Virtues (CMVICES1)**

Holthausen, F., *Vices and Virtues, Part i, Text and Translation, EETS, OS 89*.

- **Trinity Homilies (CMTRINIT)**

Morris, Richard, *Old English Homilies II, EETS OS 53* (London, 1873).

M2: 1250-1350

- **Kentish Sermons (CMKENTSE)**

Hall, Joseph (ed.), *Selections from Early Middle English 1130-1250*, (Oxford, 1920), pps. 214-222.

- **The Earliest Complete English Prose Psalter (CMEARLPS)**

Buelbring, K.D. (ed.), *The Earliest Complete English Prose Psalter, EETS OS 97*, (London, 1891).

- **Ayenbite of Inwyt (CMAYENBI)**

Morris, Richard, *Dan Michel Ayenbite of Inwyt, EETS OS 23* (London, 1866),

rev. Pamela Gradon (1965), and EETS OS 278 (London, 1979), pp.5-118, 249-271.

M3: 1350-1420

- **Chaucer:**
 - The Tale of Melibee (CMCTMELI)**, Benson, L.D. (ed.), *The Riverside Chaucer*, Third Edition, (Boston, 1987), pp. 217-239.
 - The Parson's Tale (CMCTPARS)**, Benson, L.D. (ed.), *The Riverside Chaucer*, Third Edition, (Boston, 1987), pp. 288-327.
 - A Treatise on the Astrolabe (CMASTRO)**, Benson, L.D. (ed.), *The Riverside Chaucer*, Third Edition, (Boston, 1987), pp. 662.C1.1-673.C2.7.
 - Boethius (CMBOETH)**, Benson, L.D. (ed.), *The Riverside Chaucer*, Third Edition, (Boston, 1987), pp. 429.C1.1-431.C1.195, 431.C2.1-434.C1.250, 434.C2.1-436.C2.230, 446.C2.1-449.C2.300, 450.C2.1-454.C2.376.

- **The Equatorie of the Planets (CMEQUATO)**
Price, D.J., *The Equatorie of the Planets*, (Cambridge, 1955), pp. 18.1-44.39.

- **English Wycliffite Sermons (CMWYC SER)**
Hudson, Anne (ed.), *English Wycliffite Sermons*, (Oxford, 1983), pp.223-425, 475-480, 521-524, 588-592, 643-647

- **Purvey's Prologue to the Bible (CMPURVEY)**
Forshall, J. and F. Madden (eds.), *The Holy Bible, Containing the Old and New Testaments, with the Apocryphal Books, in the Earliest English Versions Made from the Latin Vulgate by John Wycliffe and his Followers*, Vol. 1 (Oxford, 1850, reprinted 1982).

- **The New Testament (Wycliffite) (CMNTEST)**
Forshall, J. and F. Madden (eds.), *The New Testament in English according to the Version of John Wycliffe about A.D.1380 and Revised by John Purvey about A.D. 1388*, (Oxford, 1879). Sample: John I.1-XI.56

- **The Old Testament (Wycliffite) (CMOTEST)**
Forshall, J. and F. Madden (eds.), *The Holy Bible, Containing the Old and*

New Testaments, with the Apocraphal Books, in the Earliest English Versions Made from the Latin Vulgate by John Wycliffe and his Followers, Vol. 1, (Oxford, 1850). Samples: Genesis I.1-III.24, VI.1-IX.29, XII.1-XIV.20, XXII.1-XXII.19, Numbers XIII.1-XIV.45, XVI.1-XVII.13.

- **The Cloud of Unknowing (CMCLOUD)**
Hodgson, P. (ed.), *The Cloud of Unknowing and the Book of Privy Counselling*, EETS OS 218, (London, 1944, 1958).
- **The Brut or The Chronicles of England (CMBRUT)**
Brie, F.W.D., *The Brut or The Chronicles of England, Part I*, EETS OS 131, London (1960, 1906), pp. 1-128, 217-228.
- **The Polychronicon (John of Trevisa) (CMPOLYCH)**
Lumby, J.R. (ed.), *Polychronicon Ranulphi Higden, Monachi Cestrensis, Vols. VI, VIII, English Translations of John Trevisa and of an Unknown Writer of the Fifteenth Century*. Rolls Series 41, (London, 1876, 1882), Book VI pp. 3-477, Book VIII pp. 83-111, 347-352.
- **Mandeville's Travels (CMMANDEV)**
Hamelius, P. (ed.), *Mandeville's Travels, Translated from the French of Jean D'Outremeuse*, EETS OS 153, (London, 1919), 1-132, 140-145.
- **A Late Middle English Treatise on Horses (CMHORSES)**
Svinhufvud, A.C. (ed.), *A Late Middle English Treatise on Horses*, Stockholm Studies in English XLVII, (Stockholm, 1978), pp.85-129.
- **The Mirror of St. Edmund (Vernon Ms.) (CMEDVERN)**
Horstman, C. (ed.), *Yorkshire Writers: Richard Rolle of Hampole*, Swan Sonnenschein & Co. (New York, 1895), pp. 240-261.
- **The Northern Prose Rule of St. Benet (CMBENRUL)**
Kock, Ernst A., *The Northern Prose Version of The Rule of St. Benet. in Three Middle-English Versions of the Rule of St. Benet and Two Contemporary Rituals for the Ordination of Nuns*, EETS OS 120, pp.1-47, London (1902).
- **Aelred of Rievaulx's De Institutione (Ms. Vernon) (CMAELR3)**
Ayto, J. and A. Barratt, (eds.), *Aelred of Rievaulx's de Institutione Inclusarum*, EETS OS 287, (London, 1984).

M4: 1420-1500

- **Aelred of Rievaulx's de Institutione Inclusarum (Bodley 423) (CMAELR4)**
Ayto, J. and A. Barratt, (eds.), *Aelred of Rievaulx's de Institutione Inclusarum*, EETS OS 287, (London, 1984), pp.1-25.
- **The Book of Margery Kempe (CMKEMPE)**
Meech, S.B., and H.E. Allen (eds.), *The Book of Margery Kempe*, Vol. 1, EETS OS 212, (London, 1940), pp. 1-154, 221-232.
- **Capgrave's Chronicle (CMCAPCHR)**
Lucas, P.J. (ed.), *John Capgrave's Abbreuiacion of Cronicles*, EETS OS 285, (Oxford, 1983), pp. 32-160, 209-217, 238-249.
- **Capgrave's Sermon (CMCAPSER)**
Munro, J.J. (ed.), *John Capgrave's Lives of St. Augustine and St. Gilbert of Sempringham, and a Sermon*, EETS OS 140, (New York, 1910, 1971), Pp. 143.1-148.28.
- **Gregory's Chronicle (CMGREGOR)**
Gairdner J. (ed.), *The Historical Collections of a Citizen of London in the Fifteenth Century*. Camden Society, N.S. XVII, (Westminster, 1876), pp. 95.21-128, 138-143, 148-149, 156-239.
- **Malory's Morte Darthur (CMMALORY)**
Vinaver, E. (ed.), *The Works of Thomas Malory*, (London, 1954), pp.2-71, 180-209, 626-670.
- **In Die Innocencium (CMINNOCE)**
Nichols, J.G. (ed.), *Two Sermons Preached by the Boy Bishop, at St. Paul's Temp. Henry VII, and at Gloucester Temp. Mary*, Camden Society Miscellany, VII. Camden Society N.S. XIV, (London, 1875), Pp. 1.1-13.4.
- **Richard Fitzjames' Sermo de Lune (CMFITZJA)**
Jenkinson, F. (ed.), *Sermo die Lune in Ebdomada Pasche*. Westminster, Wynkyn de Worde (1495?), (Cambridge, 1907) (Facsimile), Pp. A2R.1-C1R.20.
- **Renard the Fox (Caxton) (CMREYNAR)**
Blake, N.F. (ed.), *The History of Reynard the Fox*. Translated from the Dutch

Original by William Caxton, EETS 263 (London, 1970), Pp. 6.1-14.19 and 51.20-62.26.

- **The Siege of Jerusalem (CMSIEGE)**
Kurvinen, A. (ed.), *The Siege of Jerusalem in Prose Memoires de la Societe Neophilologique de Helsinki*, XXXIV, (Helsinki, 1969), Pp. 70.1-93.709
- **The Life of St. Edmund (CMEDMUND)**
Blake, N.F. (ed.), "The Life of St. Edmund", In *Middle English Religious Prose*, York Medieval Texts (London, 1972), pp. 163-173.
- **Richard Rolle: Epistles (The Form of Living, Ego Dormio, The Commandment) (CMROLLEP)**
Allen, Hope Emily (ed.), *English Writings of Richard Rolle Hermit of Hampole*, (Oxford, 1931), pp.61-119
- **Richard Rolle: Prose Treatises from the Thornton Ms. (CMROLLETR)**
Perry, George (ed.), *English Prose Treatises of Richard Rolle of Hampole*, EETS OS 20, (London, 1866, 1921). Page Numbers unknown.
- **The Book of Vices and Virtues (CMVICES4)**
Francis, W.N. (ed.), *The Book of Vices and Virtues: A Fourteenth Century English Translation of The Somme le Roi of Lorens D'Orleans*, EETS OS 217, (London 1942), 97.8-116.25.
- **Mirk's Festial (CMMIRK)**
Erbe, T. (ed.), *Mirk's Festial: A collection of homilies, by Johannes Mirkus (John Mirk)*, Part I, EETS ES 96 (London, 1905), pp. 1.4-5.36, 82.9-85.10.
- **The Mirror of St. Edmund (Thornton Ms.) (CMEDTHOR)**
Perry, G.G. (ed.), *The Mirror of St. Edmund, in Religious Pieces in Prose and Verse*, EETS OS 26 (New York, 1969 (1914)), pp. 16-50.
- **Middle English Sermons (CMROYAL)**
Ross, W.O. (ed.), *Middle English Sermons edited from British Museum Ms. Royal 18 B. XXIII*. EETS OS 209 (London, 1940), pp.9.3-12.17, 16.2-19.34, 251.22-261.21.
- **Dan Jon Gaytryge's Sermon (CMGAYTRY)**
Perry, G.G. (ed.), *Dan Jon Gaytryge's Sermon, in Religious Pieces in Prose and Verse*, EETS OS 26 (New York, 1969 (1914)), pp. 1-15.

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- **Hilton's Eight Chapters on Perfection (CMHILTON)**
Kuriyagawa, F. (ed), *Walter Hilton's Eight Chapters on Perfection*, (Tokyo, 1967), pp. 1-33.
 - **Julian of Norwich's Revelations of Divine Love (CMJULNOR)**
Beer, F. (ed.), *Julian of Norwich's Revelations of Divine Love: The shorter version edited from B.L. Add. Ms 37790*, (Heidelberg, 1978), pp. 48-62.
Period MX4 (comp. unknown, ms. date 1420-1500)
 - **Liber de Diversis Medicinis (CMTHORN)**
Ogden, M.S. (ed.), *The 'Liber de Diversis Medicinis' in the Thornton Manuscript*, EETS 207, (London, 1938).

Appendix C

Texts and Editions included in the York-Helsinki Parsed Corpus of Old English Poetry

The following texts are included in the York-Helsinki Corpus of Old English Poetry. These details are taken from the corpus documentation, and can be found at:

<http://www-users.york.ac.uk/~lang18/ptext-list.html>

- **coandrea.psd.** Primary source: THE VERCELLI BOOK. THE ANGLO-SAXON POETIC RECORDS, II. ED. G. P. KRAPP. NEW YORK: COLUMBIA UNIVERSITY PRESS, 1932. PP. 3.1 - 12.348 (SAMPLE 1). PP. 29.950 - 37.1242 (SAMPLE 2). PP. 44.1478 - 51.1722 (SAMPLE 3).

Secondary source: *Andreas and the Fates of the Apostles*, ed. G. P. Krapp, Boston, MA: Ginn, 1906. Word count: 4860.

- **cobeowul.psd.** Primary source: BEOWULF AND JUDITH. THE ANGLO-SAXON POETIC RECORDS, IV. ED. E. V. K. DOBBIE. NEW YORK: COLUMBIA UNIVERSITY PRESS, 1953. PP. 3.1 - 98.3182.

Secondary source: *Beowulf: An Edition with Relevant Shorter Texts*, ed. B. Mitchell and F. C. Robinson, Oxford and Cambridge, MA: Blackwell, 1998. Word count: 17310.

- **cobrunan.psd.** Primary source: THE ANGLO-SAXON MINOR POEMS. THE ANGLO-SAXON POETIC RECORDS, VI. ED. E. V. K. DOBBIE. NEW

YORK: COLUMBIA UNIVERSITY PRESS, 1942. PP. 16.1 - 20.73.

Secondary source: *The Battle of Brunanburh*, ed. A. Campbell, London: William Heinemann, 1938. Word count: 370.

- **cochrist.psd.** Primary source: THE EXETER BOOK. THE ANGLO-SAXON POETIC RECORDS, III. ED. G. P. KRAPP AND E. V. K. DOBBIE. NEW YORK: COLUMBIA UNIVERSITY PRESS, 1936. PP. 3.1 - 15.439 (SAMPLE 1). PP. 15.440 - 27.866 (SAMPLE 2). PP. 27.867 - 33.1080. (SAMPLE 3).

Secondary source: *The Advent Lyrics of the Exeter Book*, ed. J. J. Campbell, Princeton: Princeton University Press, 1959. Word count: 6130.

- **cocynnew.psd.** Primary sources: (1) THE VERCELLI BOOK. THE ANGLO-SAXON POETIC RECORDS, II. ED. G. P. KRAPP. NEW YORK: COLUMBIA UNIVERSITY PRESS, 1932. PP. 51.1 - 54.122 (FATES OF APOSTLES). PP. 66.1 - 102.1321 (ELENE). (2) THE EXETER BOOK. THE ANGLO-SAXON POETIC RECORDS, III. ED. G. P. KRAPP AND E. V. K. DOBBIE. NEW YORK: COLUMBIA UNIVERSITY PRESS, 1936. PP. 113.1 - 133.731 (JULIANA).

Secondary sources: (1) *Andreas and the Fates of the Apostles*, ed. G. P. Krapp, Boston, MA: Ginn, 1906. (2) *Cynewulf's Elene*, ed. P. O. E. Gradon, London: Methuen, 1958. (3) *The Juliana of Cynewulf*, ed. W. Strunk, Boston and London: D. C. Heath, 1904. Word count: 670 + 7310 + 4130 = 12,110.

- **codream.psd.** Primary source: THE VERCELLI BOOK. THE ANGLO-SAXON POETIC RECORDS, II. ED. G. P. KRAPP. NEW YORK: COLUMBIA UNIVERSITY PRESS, 1932. PP. 61.1 - 65.156.

Secondary source: *A Guide to Old English*, 5th edition, B. Mitchell and F. C. Robinson, Oxford and Cambridge, MA: Blackwell, 1992. Word count: 1100.

- **coexeter.psd.** Primary source: THE EXETER BOOK. THE ANGLO-SAXON POETIC RECORDS, III. ED. G. P. KRAPP AND E. V. K. DOBBIE. NEW YORK: COLUMBIA UNIVERSITY PRESS, 1936. PP. 134.1 - 137.116 (THE WANDERER). PP. 143.1 - 147.124 (THE SEAFARER). PP. 149.1 - 153.143 (WIDSITH). PP. 154.1 - 156.98 (FORTUNES OF MEN). PP. 156.1 - 163.204 (MAXIMS I). PP. 166.1 - 169.87 (THE RIMING POEM). PP. 169.1 - 171.174 (THE PANTHER). PP. 171.1 - 174.88 (THE WHALE). PP. 174.1 - 174.16 (THE

PARTRIDGE). PP. 178.1 - 179.42 (DEOR). PP. 179.1 - 180.19 (WULF AND EADWACER). PP. 210.1 - 211.53 (THE WIFE'S LAMENT).

Secondary sources: (1) *The Old English Riming Poem*, ed. O. D. Macrae-Gibson, Cambridge: D. S. Brewer, 1987. *The Old English Physiologus*, ed. A. Squires, Durham: Durham Medieval Texts, 1988. (2) *A Guide to Old English*, 5th edition, B. Mitchell and F. C. Robinson, Oxford and Cambridge, MA: Blackwell, 1992. (3) *Old English Minor Heroic Poems*, ed. J. Hill, Durham: Durham Medieval Texts, 1994. (4) *Gnomic Poetry in Anglo-Saxon*, ed. B. C. Williams, New York: AMS Press, 1966. Word count: 690 + 770 + 850 + 550 + 1440 + 500 + 390 + 470 + 90 + 230 + 120 + 320 = 6420.

- **coexodus.psd**. Primary source: THE JUNIUS MANUSCRIPT. THE ANGLO-SAXON POETIC RECORDS, I. ED. G. P. KRAPP. LONDON: GEORGE ROUTLEDGE & SONS, LTD AND NEW YORK: COLUMBIA UNIVERSITY PRESS, 1931. PP. 91.1 - 107.590.

Secondary source: *Exodus*, ed. P. J. Lucas, London: Methuen, 1977. Word count: 2980.

- **cogenesi.psd**. Primary source: THE JUNIUS MANUSCRIPT. THE ANGLO-SAXON POETIC RECORDS, I. ED. G. P. KRAPP. LONDON: GEORGE ROUTLEDGE & SONS, LTD AND NEW YORK: COLUMBIA UNIVERSITY PRESS, 1931. PP. 3.1 - 9.234 (SAMPLE 1). PP. 32.965 - 40.1284 (SAMPLE 2). PP. 72.2419 - 82.2759 (SAMPLE 3).

Secondary source: *Genesis A: A New Edition*, ed. A. N. Doane, Madison: The University of Wisconsin Press, 1978. Word count: 4840.

- **cokentis.psd**. Primary source: THE ANGLO-SAXON MINOR POEMS. THE ANGLO-SAXON POETIC RECORDS, VI. ED. E. V. K. DOBBIE. NEW YORK: COLUMBIA UNIVERSITY PRESS, 1942. PP. 87.1 - 88.43 (THE KENTISH HYMN). PP. 88.1 - 94.157 (THE KENTISH PSALM).

Secondary source: *Sweet's Anglo-Saxon Reader in prose and Verse*, ed. D. Whitelock, Oxford: Clarendon, 1967. Word count: 230 + 840 = 1070.

- **cometboe.psd**. Primary source: THE PARIS PSALTER AND THE METERS OF BOETHIUS. THE ANGLO-SAXON POETIC RECORDS, V. ED. G. P. KRAPP. LONDON: GEORGE ROUTLEDGE & SONS, LTD AND NEW YORK: COLUMBIA UNIVERSITY PRESS, 1933. PP. 158.1 - 159.46 (5). PP. 160.1 -

173.80 (7-13). PP. 176.1 - 177.47 (19). PP. 185.1 - 186.44 (21). PP. 188.1 - 192.74 (24-25). PP. 197.1 - 202.96 (28-29). Word count: 5270.

- **conorthu.psd.** Primary sources: (1) THE ANGLO-SAXON MINOR POEMS. THE ANGLO-SAXON POETIC RECORDS, VI. ED. E. V. K. DOBBIE. NEW YORK: COLUMBIA UNIVERSITY PRESS, 1942. PP. 105.1 - 105.9 (CAEDMON'S HYMN). PP. 107.1 - 107.5 (BEDE'S DEATH SONG). PP. 109.1 - 109.14 (THE LEIDEN RIDDLE). (2) THE DREAM OF THE ROOD. ED. B. DICKINS AND A. S. C. ROSS. LONDON: METHUEN & CO. LTD., 1956 (1934). CORRECTIONS BY R. W. V. ELLIOTT, RUNES: AN INTRODUCTION (MANCHESTER, 1959). PP. 90-96, AND FIGURES 38-40. PP. 25.39 - 29.64 (THE RUTHWELL CROSS).

Secondary source: *Three Northumbrian Poems*, ed. A. H. Smith, London: Methuen, 1933. Word count: 40 + 30 + 90 + 70 = 230.

- **cophoeni.psd.** Primary source: THE EXETER BOOK. THE ANGLO-SAXON POETIC RECORDS, III. ED. G. P. KRAPP AND E. V. K. DOBBIE. NEW YORK: COLUMBIA UNIVERSITY PRESS, 1936. PP. 94.1 - 113.677.

Secondary source: *The Phoenix*, ed. N. F. Blake, Manchester: Manchester University Press, 1964. Word count: 3710.

- **coriddle.psd.** Primary source: THE EXETER BOOK. THE ANGLO-SAXON POETIC RECORDS, III. ED. G. P. KRAPP AND E. V. K. DOBBIE. NEW YORK: COLUMBIA UNIVERSITY PRESS, 1936. PP. 180.1 - 189.11 (1-17). PP. 190.1 - 195.14 (20-29). PP. 196.1 - 198.14 (31-35). PP. 199.1 - 203.108 (39-40). PP. 203.1 - 204.16 (42-43). P. 206.1 - 206.10 (49-50). PP. 207.1 - 208.12 (53-56). PP. 209.1 - 210.18 (58-59). P. 229.1 - 229.9 (61-62). PP. 230.1 - 231.10 (66). P. 235.1 - 235.11 (80). PP. 240.1 - 241.11 (91). P. 243.1 - 243.13 (95).

Secondary source: *The Old English Riddles of the Exeter Book*, ed. C. Williamson, Chapel Hill: The University of North Carolina Press, 1977. Word count: 5090.

Appendix D

Example CorpusSearch Queries

In all these files, the ignore list and node are set up as follows:

```
ignore_nodes: \**|*CONJ*|*VOC*|*LFD*|INTJ|CODE|ID|  
LB|'|\"|,|E_S|/  
node: IP*  
remove_nodes: F
```

The following definition files are used:

For *not*:

```
not_neg: $noht*|na+ght*|Na+ght*|nacht*|Nacht*|naht*|Naht*|nat*  
|Nat*|nau+gt*|Nau+gt*|nauht*|Nauht*|naut*|Naut*|nawhit*  
|Nawhit*|nawicht*|Nawicht*|nawiht*|Nawiht*|nawt*|Nawt*  
|nocht*|Nocht*|noght*|Noght|noghte*|Noghte*|nohht*|Nohht*  
|noht*|Noht*|not*|Not*|nou+gt*|Nou+gt*|nought*|Nought*|Na+gt*  
|na+gt*|no+gt*|No+gt*|nowt*|Nowt*|naut|Naut
```

For negative adverb *never*:

```
never_adv: n+afr*|n+aur*|n+adem*|nafr*|naurema|nauwer*  
|neauer*|naur*|nefr*|neuer*|neure*|neuyr*|never*|newenn*
```

D.1 Chapter Two

Incidence of *ne*

```

print_complement: T
query: (((IP-MAT* iDominates NEG*)
  AND (NEG* iDominates !not_neg))
  AND (IP-MAT* iDominates *BEP*|*BED*|*HVP*|*HVD*|*MD*|
*UT*|*AX*|*VBP*|*VBD*))

```

ne adjacent and non-adjacent to a finite verb:

```

print_complement: T
query: (((((IP-MAT* iDominates NEG*)
  AND (NEG* iDominates !not_neg))
  AND (IP-MAT* iDominates *BEP*|*BED*|*HVP*|*HVD*|*MD*|
*UT*|*AX*|*VBP*|*VBD*))
  AND (NEG* iPrecedes *BEP*|*BED*|*HVP*|*HVD*|*MD*|
*UT*|*AX*|*VBP*|*VBD*))

```

not preceding a pronominal subject in subject verb inversion:

```

definition file: not.def
query: ((((((IP* iDominates NEG)
  AND (NEG iDominates not_neg))
  AND (IP* iDominates *BEP*|*BED*|*HVP*|
*HVD*|*MD*|*UT*|*AX*|*VBP*|*VBD*))
  AND (IP* iDominates NP-SBJ*))
  AND (NP-SBJ* iDomsOnly PRO*))
  AND (NEG precedes NP-SBJ*))

```

not in clauses with a pronominal subject and subject-verb inversion:

```

definition file: not.def
query: ((((((IP* iDominates NEG)
  AND (NEG iDominates not_neg))
  AND (IP* iDominates *BEP*|*BED*|*HVP*|*HVD*|
*MD*|*UT*|*AX*|*VBP*|*VBD*))
  AND (IP* iDominates NP-SBJ*))
  AND (NP-SBJ* iDomsOnly PRO*))
  AND (*BEP*|*BED*|*HVP*|*HVD*|*MD*|*UT*|*AX*|
*VBP*|*VBD* precedes NP-SBJ*))

```

not preceding a finite verb: (run separately for IP-MAT* and IP-SUB*)

definition file: not.def

```
query: (((((IP-MAT* iDominates NEG)
  AND (NEG iDominates not_neg))
  AND (IP-MAT* iDominates *BEP*|*BED*|*HVP*|*HVD*
|*MD*|*UT*|*AX*|*VBP*|*VBD*))
  AND (IP-MAT* iDominates NP-SBJ*))
  AND (NEG precedes *BEP*|*BED*|*HVP*|
*HVD*|*MD*|*UT*|*AX*|*VBP*|*VBD*))
```

definition file: not.def

```
query: ((((((IP-MAT* iDominates NEG)
  AND (NEG iDominates not_neg))
  AND (IP-MAT* iDominates *BEP*|*BED*|*HVP*|*HVD*
|*MD*|*UT*|*AX*|*VBP*|*VBD*))
  AND (IP-MAT* iDominates NP-SBJ*))
  AND (NEG precedes *BEP*|*BED*|*HVP*|*HVD*|
*MD*|*UT*|*AX*|*VBP*|*VBD*))
  AND (NP-SBJ* iDomsOnly PRO*))
```

definition file: not.def

```
query: ((((((IP-MAT* iDominates NEG)
  AND (NEG iDominates not_neg))
  AND (IP-MAT* iDominates *BEP*|*BED*|*HVP*|*HVD*|
*MD*|*UT*|*AX*|*VBP*|*VBD*))
  AND (IP-MAT* iDominates NP-SBJ*))
  AND (NEG precedes *BEP*|*BED*|*HVP*|*HVD*|
*MD*|*UT*|*AX*|*VBP*|*VBD*))
  AND (NP-SBJ* iDoms N*|D*|Q*|ADJ*|NPR*))
```

definition file: not.def

```
query: ((((((IP-MAT* iDominates NEG)
  AND (NEG iDominates not_neg))
  AND (IP-MAT* iDominates *BEP*|*BED*|*HVP*|
*HVD*|*MD*|*UT*|*AX*|*VBP*|*VBD*))
  AND (IP-MAT* iDominates NP-SBJ*))
```

```

AND (NEG precedes *BEP* | *BED* | *HVP* |
*HVD* | *MD* | *UT* | *AX* | *VBP* | *VBD*))
AND (NP-SBJ* iDoms **))

```

Object pronoun preceding *not* (run for IP-MAT* and IP-SUB* separately)

definition file: not.def

```

query: (((((((((IP-SUB* iDominates NEG)
AND (IP-SUB* iDominates *BEP* | *BED* | *BEI* | *HVP* | *HVD* | *HVI* |
*MD* | *AX* | *DOP* | *DOD* | *DOI* | *VBP* | *VBD* | *VBI*))
AND (IP-SUB* iDominates NP-OB*))
AND (NP-OB* iDominatesOnly PRO*))
AND (
*BEP* | *BED* | *BEI* | *HVP* | *HVD* | *HVI* | *MD* | *AX* | *DOP* |
*DOD* | *DOI* | *VBP* | *VBD* | *VBI* precedes NP-OB*))
AND (NEG iDominates not_neg))
AND (
*BEP* | *BED* | *BEI* | *HVP* | *HVD* | *HVI* | *MD* | *AX* | *DOP* |
*DOD* | *DOI* | *VBP* | *VBD* | *VBI* precedes NEG))
AND (IP-SUB* iDominates NP-SBJ))
AND (NP-OB* precedes NEG)) (or cf. NEG precedes
NP-OB* for order 'not-obj)

```

Object NP preceding *not* (run for IP-MAT* and IP-SUB* separately)

definition file: not.def

```

query: (((((((((IP-SUB* iDominates NEG)
AND (IP-SUB* iDominates *BEP* | *BED* | *BEI* | *HVP* | *HVD* | *HVI* |
*MD* | *AX* | *DOP* | *DOD* | *DOI* | *VBP* | *VBD* | *VBI*))
AND (IP-SUB* iDominates NP-OB*))
AND (NP-OB* iDominates N* | D* | *Q* | *ADJ* | *NPR*))
AND (
*BEP* | *BED* | *BEI* | *HVP* | *HVD* | *HVI* | *MD* | *AX* |
*DOP* | *DOD* | *DOI* | *VBP* | *VBD* | *VBI* precedes NP-OB*))
AND (NEG iDominates not_neg))
AND (
*BEP* | *BED* | *BEI* | *HVP* | *HVD* | *HVI* | *MD* | *AX* |
*DOP* | *DOD* | *DOI* | *VBP* | *VBD* | *VBI* precedes NEG))

```

AND (IP-SUB* iDominates NP-SBJ))
 AND (NP-OB* precedes NEG)) (or cf. NEG precedes
 NP-OB* for order 'not-obj)

Object preceding adverb:

definition file: not.def

```
query: ((((((((((IP-MAT* iDominates ADVP*)
  AND (IP-MAT* iDominates
    *BEP* | *BED* | *BEI* | *HVP* | *HVD* | *HVI* | *MD | *AX | *DOP* |
  *DOD* | *DOI* | *VBP* | *VBD* | *VBI*))
  AND (IP-MAT* iDominates NP-OB*))
  AND (NP-OB* iDomsOnly N* | D* | *Q* | *ADJ* | *NUM* | *NPR*))
  AND (
    *BEP* | *BED* | *BEI* | *HVP* | *HVD* | *HVI* | *MD | *AX | *DOP* | *DOD*
  | *DOI* | *VBP* | *VBD* | *VBI* precedes NP-OB*))
  AND (
    *BEP* | *BED* | *BEI* | *HVP* | *HVD* | *HVI* | *MD | *AX | *DOP* | *DOD* |
  *DOI* | *VBP* | *VBD* | *VBI* precedes ADVP*))
  AND (IP-MAT* iDominates NP-SBJ))
  AND (ADVP* iDominates ADV*))
  AND (NP-OB* precedes ADVP*))
```

definition file: not.def

```
query: ((((((((((IP-MAT* iDominates ADVP*)
  AND (IP-MAT* iDominates
    *BEP* | *BED* | *BEI* | *HVP* | *HVD* | *HVI* | *MD | *AX | *DOP* | *DOD*
  | *DOI* | *VBP* | *VBD* | *VBI*))
  AND (IP-MAT* iDominates NP-OB*))
  AND (NP-OB* iDomsOnly PRO*))
  AND (
    *BEP* | *BED* | *BEI* | *HVP* | *HVD* | *HVI* | *MD | *AX | *DOP* | *DOD*
  | *DOI* | *VBP* | *VBD* | *VBI* precedes NP-OB*))
  AND (
    *BEP* | *BED* | *BEI* | *HVP* | *HVD* | *HVI* | *MD | *AX | *DOP* | *DOD*
  | *DOI* | *VBP* | *VBD* | *VBI* precedes ADVP*))
  AND (IP-MAT* iDominates NP-SBJ))
```



```

AND (ADVP* iDominates ADV*))
AND (NP-OB* precedes ADVP*))

```

not preceding a postverbal NP subject in non-conjoined main clauses:

definition file: not.def

```

query: (((((((((IP-MAT* iDominates NEG)
AND (NEG iDominates not_neg))
AND (IP-MAT* iDominates *VBP*|*VBD*|*BEP*|*BED*|
*MD*|*AX*|*UT*|*HVP*|*HVD*))
AND (IP-MAT* iDominates NP-SBJ))
AND (NP-SBJ iDominates N*|D*|*Q*|*ADJ*|*NPR*))
AND (NP-SBJ precedes NEG))
AND (*VBP*|*VBD*|*BEP*|*BED*|
*MD*|*AX*|*UT*|*HVP*|*HVD* precedes NP-SBJ*))
AND (IP-MAT* iDominates !*CONJ*))
AND (*VBP*|*VBD*|*BEP*|*BED*|*MD*|
*AX*|*UT*|*HVP*|*HVD* precedes NEG))

```

not following a postverbal NP subject in non-conjoined main clauses:

definition file: not.def

```

query: (((((((((IP-MAT* iDominates NEG)
AND (NEG iDominates not_neg))
AND (IP-MAT* iDominates *VBP*|*VBD*|*BEP*|
*BED*|*MD*|*AX*|*UT*|*HVP*|*HVD*))
AND (IP-MAT* iDominates NP-SBJ))
AND (NP-SBJ iDominates N*|D*|*Q*|*ADJ*|*NPR*))
AND (NEG precedes NP-SBJ))
AND (*VBP*|*VBD*|*BEP*|*BED*|*MD*|*AX*|*UT*
|*HVP*|*HVD* precedes NP-SBJ*))
AND (IP-MAT* iDominates !*CONJ*))
AND (*VBP*|*VBD*|*BEP*|*BED*|*MD*|*AX*|
*UT*|*HVP*|*HVD* precedes NEG))

```

not preceding an NP subject in subordinate clauses:

definition file: not.def

```

query: ((((((IP-SUB* iDominates NEG)
  AND (NEG iDominates not_neg))
  AND (IP-SUB* iDominates *BEP*|*BED*|*HVP*|*HVD*
|*MD*|*AXP*|*AXD*|*VBP*|*VBD*))
  AND (IP-SUB* iDominates NP-SBJ))
  AND (NP-SBJ iDominates N*|D*|*Q*|*ADJ*|*NPR*))
  AND (NEG precedes NP-SBJ)) (cf. NP-SBJ precedes NEG
for NP subjects preceding \textit{not})

```

OE *na* following a postverbal full NP subject:

```

query: ((((((((((IP-MAT* iDominates ADVP*)
  AND (ADVP* iDominates NEG+ADV*))
  AND (IP-MAT* iDominates *VBP*|*VBD*|*BEP*|*BED*|
*MD*|*UT*|*HVP*|*HVD*))
  AND (IP-MAT* iDominates NP-NOM))
  AND (NP-NOM iDominates N*|D*|*Q*|*ADJ*|*NPR*))
  AND (NP-NOM precedes ADVP*))
  AND (*VBP*|*VBD*|*BEP*|*BED*|*MD*|*UT*
|*HVP*|*HVD* precedes NP-NOM))
  AND (*VBP*|*VBD*|*BEP*|*BED*|*MD*|*UT*
|*HVP*|*HVD* precedes ADVP*))
  AND (NEG+ADV* iDominates na|Na|NA|no|No|NO))

```

OE *na* preceding a postverbal full NP subject:

```

query: ((((((((((IP-MAT* iDominates ADVP*)
  AND (ADVP* iDominates NEG+ADV*))
  AND (IP-MAT* iDominates *VBP*|*VBD*|*BEP*|*BED*|
*MD*|*UT*|*HVP*|*HVD*))
  AND (IP-MAT* iDominates NP-NOM))
  AND (NP-NOM iDominates N*|D*|*Q*|*ADJ*|*NPR*))
  AND (ADVP* precedes NP-NOM))
  AND (*VBP*|*VBD*|*BEP*|*BED*|*MD*|*UT*|*HVP*|
*HVD* precedes NP-NOM))
  AND (*VBP*|*VBD*|*BEP*|*BED*|*MD*|*UT*|*HVP*|
*HVD* precedes ADVP*))
  AND (NEG+ADV* iDominates na|Na|NA|no|No|NO))

```

(similarly for subordinate clauses: IP-SUB*)

The frequency of OE *na* in multiple negation (IP-MAT* and IP-SUB* separately):

```
query: (((((IP-SUB* iDominates [2]NP*|QP*|ADVP*)
  AND ([2]NP*|QP*|ADVP* iDominates [2]NEG*))
  AND (IP-SUB* iDominates [1]ADVP*))
  AND ([1]ADVP* iDominates [1]NEG*))
  AND ([1]NEG* iDominates na|Na|NA|no|No|NO))
```

The frequency of OE *næfre* in multiple negation (IP-MAT* and IP-SUB* separately):

definition file: never.def

```
query: (((((IP-SUB* iDominates [2]NP*|QP*|ADVP*)
  AND ([2]NP*|QP*|ADVP* iDominates [2]NEG*))
  AND (IP-SUB* iDominates [1]ADVP*))
  AND ([1]ADVP* iDominates [1]NEG*))
  AND ([1]NEG* iDominates never_adv))
```

The frequency of OE *na* in multiple negation (IP-MAT* and IP-SUB* separately):

```
query: (((((IP-SUB* iDominates [2]NP*|QP*|ADVP*)
  AND ([2]NP*|QP*|ADVP* iDominates [2]NEG*))
  AND (IP-SUB* iDominates [1]ADVP*))
  AND ([1]ADVP* iDominates [1]NEG*))
  AND ([1]NEG* iDominates na|Na|NA|no|No|NO))
```

The frequency of ME *not* in multiple negation (IP-MAT* and IP-SUB* separately):

definition file: never.def

```
query: (((((IP-MAT* iDominates ADVP*)
  AND (ADVP* iDominates *ADV*))
  AND (*ADV* iDominates never_adv))
  AND (IP-MAT* iDominates NEG))
  AND (NEG iDominates not_neg))
```

definition file: never.def

```
query: (((((IP-MAT* iDominates NP*))
```

```

AND (NP* iDominates *Q*)
AND (*Q* iDominates n*|N*)
AND (IP-MAT* iDominates NEG)
AND (NEG iDominates not_neg)

```

The frequency of ME *never* in multiple negation (IP-MAT* and IP-SUB* separately):

```

definition file: never.def
query: ((((((IP-MAT* iDominates ADVP*)
AND (ADVP* iDominates *ADV*))
AND (*ADV* iDominates never_adv))
AND (IP-MAT* iDominates NP*))
AND (NP* iDoms *Q*))
AND (Q* iDoms n*|N*))

```

The distribution of EME *not* by clause type (IP-MAT* and IP-SUB* separately):

```

definition file: not.def
query: ((IP-MAT* iDominates NEG)
AND (NEG iDominates not_neg))

```

The distribution of OE *na* by clause type (IP-MAT* and IP-SUB* separately):

```

query: (((((IP-SUB* iDominates ADVP*)
AND (ADVP* iDominates NEG+ADV*))
AND (NEG+ADV* iDomsOnly na|Na|NA|no|No|NO))
AND (IP-SUB* iDominates NEG*))

```

All negative clauses with a sentential negative marker (IP-MAT* and IP-SUB* separately):

```

query: (IP-MAT*|IP-SUB* iDominates NEG*)

```

D.2 Chapter Three

Non-conjoined negative clauses with *ne* and a subject pronoun

```

shorthand: (((IP-MAT* iDominates [1]NEG*)
  AND (IP-MAT* iDominates NP-NOM))
  AND (NP-NOM iDomsOnly PRO*))
  AND (IP-MAT* iDominates !*CONJ*))

```

Query applied to the output of the above to isolate subjunctives and imperatives: the complement file excluded these.

```

print_complement: T
shorthand: (((((IP-MAT* iDominates [1]NEG*)
  AND (IP-MAT* iDominates NP-NOM))
  AND (NP-NOM iDomsOnly PRO*))
  AND (IP-MAT* iDominates !*CONJ*))
  AND (IP-MAT* iDominates *DH*|*PH*|*DS*|*PS*|
*BEI*|*HVI*|*MDI*|*AXI*|*VBI*))

```

Non-conjoined clauses with *na* and a subject pronoun

```

shorthand: ((((((IP-MAT* iDominates [1]NEG*)
  AND (IP-MAT* iDominates NP-NOM))
  AND (NP-NOM iDomsOnly PRO*))
  AND (IP-MAT* iDominates !*CONJ*))
  AND (IP-MAT* iDominates ADVP*))
  AND (ADVP* iDominates NEG+ADV*))
  AND (NEG+ADV* iDominates na|Na|NA|no|No|NO))

```

Non-conjoined clauses with multiple negation: this file produces a complement file which isolates unsupported *ne* at stage one of Jespersen's Cycle

```

print_complement: T
shorthand: ((((((IP-MAT* iDominates [1]NEG*)
  AND (IP-MAT* iDominates NP-NOM))
  AND (NP-NOM iDomsOnly PRO*))
  AND (IP-MAT* iDominates !*CONJ*))
  AND (IP-MAT* iDominates ADVP*|QP*|NP*|ADJP*))
  AND (ADVP*|QP*|NP*|ADJP* iDominates NEG+ADV*|NEG+Q*))

```

These queries distinguish unsupported and supported *ne* at successive stages of Jespersen's Cycle. The following queries establish the position of *ne+V* in the

clauses, and are run for each stage of Jespersen's Cycle separately, as well as the pool of clauses overall.

Non-conjoined clauses with subject pronouns in which the negation precedes the subject (NegV1 clauses). Clauses with initial adverbs are excluded, as these are separate contexts for inversion in both positive and negative clauses. This query separates negative inversion and non-inversion contexts. The results were checked manually to separate NegV1 clauses and other remaining inversion contexts.

```
print_complement: T
shorthand: (((IP-MAT* iDoms [1]NEG*)
  AND (IP-MAT* iDominates NP-NOM))
  AND (NP-NOM iDomsOnly PRO*))
  AND (IP-MAT* iDominates !*CONJ*))
  AND ([1]NEG* Precedes NP-NOM))
  AND (IP-MAT* iDomsNumber1 !ADVP*))
```

For OE prose and poetry, the following query isolates clauses with initial non-verbal negatives without *ne*

```
shorthand: ((((((IP-MAT* iDoms [1]ADVP*|QP*)
  AND (IP-MAT* iDominates NP-NOM))
  AND (NP-NOM iDomsOnly PRO*))
  AND (IP-MAT* iDominates !*CONJ*))
  AND ([1]ADVP*|QP* Precedes NP-NOM))
  AND ([1]ADVP*|QP* iDominates NEG+Q*|NEG+ADV*))
  AND (IP-MAT* iDoms ![2]NEG*))
```

For negatives following the pronominal subject the order of NP-NOM and [1]ADVP*|QP* is reversed (NP-NOM Precedes [1]ADVP*|QP*).

D.3 Chapter Five

The overall frequency of ME *ne* (IP-MAT* and IP-SUB* separately):

```
definition file: not.def
query: ((IP-MAT* iDominates NEG*)
  AND (NEG* iDominates !not_neg))
```

This gets all examples of *ne*, including those in *ne...not* and multiple negation. Therefore, the following query files were run to exclude *ne...not* and multiple negation, by reducing the original data into a series of output and complement files. Once multiple negation and *ne...not* are excluded the final complement file gives the frequency of unsupported *ne*.

The frequency of *ne...not* (IP-MAT* and IP-SUB* separately).

```
definition file: not.def
query: (((IP-MAT* iDominates [1]NEG)
      AND ([1]NEG iDominates not_neg))
      AND (IP-MAT* iDoms [2]NEG*))
```

To find multiple negation in order to exclude it here (IP-MAT* and IP-SUB* separately).

```
definition file: not.def
query: (((((IP-MAT* iDominates [1]NEG*)
      AND (IP-MAT* iDoms NP*|ADJP*|*QP*))
      AND (NP*|ADJP*|*QP* iDoms *Q*))
      AND (*Q* iDoms n*|N*))
```

```
definition file: never.def
query: (((((IP-MAT* iDominates [1]NEG*)
      AND (IP-MAT* iDoms ADVP*))
      AND (ADVP* iDoms *ADV*))
      AND (*ADV* iDoms never_adv))
```

Unsupported *not* at stage three of Jespersen's Cycle (IP-MAT* and IP-SUB* separately):

First, find all ME *not*:

```
definition file: not.def
query: ((IP-MAT* iDominates [1]NEG)
      AND ([1]NEG iDominates not_neg))
```

Then exclude those which co-occur with *ne* by splitting the output (IP-MAT* and IP-SUB* separately):

```
print_complement: T
definition file: not.def
query: (((IP-MAT* iDominates [1]NEG)
      AND ([1]NEG iDominates not_neg))
      AND (IP-MAT* iDoms [2]NEG*))
```

Negatives in the scope of a higher negation:

```
shorthand: (((([1]IP-MAT*|IP-SUB* dominates CP*)
      AND (CP* dominates [2]IP-SUB*))
      AND ([1]IP-MAT*IP-SUB* iDominates [1]NEG*))
      AND ([2]IP-SUB* iDominates [2]NEG*))
```

(then *ne*, *ne...not*, *not* separated using the same queries as other subordinate clauses.)

Negative *if*-clauses:

```
query: ((((((IP-MAT* iDoms PP*)
      AND (PP* Doms P*))
      AND (P* iDoms *if*|*yf*|*ef*))
      AND (PP* iDoms CP*))
      AND (CP* Doms IP-SUB*))
      AND (IP-SUB* iDoms [1]NEG*))
```

Negative *if*-clauses in the scope of negation:

```
query: ((((((IP-MAT* iDoms PP*)
      AND (PP* Doms P*))
      AND (P* iDoms *if*|*yf*|*ef*))
      AND (PP* iDoms CP*))
      AND (CP* Doms IP-SUB*))
      AND (IP-SUB* iDoms [1]NEG*))
      AND (IP-MAT* iDoms [2]NEG*))
```

(then *ne*, *ne...not*, *not* separated using the same queries as other subordinate clauses)

The incidence of multiple negation involving *not* (IP-MAT* and IP-SUB* separately).


```

definition file: not.def
query: (((((IP-MAT* iDominates NP*)
  AND (NP* iDominates *Q*))
  AND (*Q* iDominates n*|N*))
  AND (IP-MAT* iDominates NEG))
  AND (NEG iDominates not_neg))

```

```

definition file: not.def
query: ((((((IP-SUB* iDominates PP*)
  AND (PP* iDominates NP*))
  AND (NP* iDominates *Q*))
  AND (*Q* iDominates n*|N*))
  AND (IP-SUB* iDominates NEG))
  AND (NEG iDominates not_neg))

```

Queries to establish frequency of *ne* in negative doubling: (IP-MAT* and IP-SUB* separately)

```

definition file: not.def
query: (((IP-MAT* iDoms NP*|ADJP*|*QP*))
  AND (NP*|ADJP*|*QP* iDoms *Q*))
  AND (*Q* iDoms n*|N*))

```

```

definition file: never.def
query: (((IP-MAT* iDoms ADVP*))
  AND (ADVP* iDoms *ADV*))
  AND (*ADV* iDoms never_adv))

```

Frequency of *ne* then calculated using the following files to split the output:

```

print_complement: T
definition file: not.def
query: (((IP-MAT* iDominates [1]NEG*)
  AND (IP-MAT* iDoms NP*|ADJP*|*QP*))
  AND (NP*|ADJP*|*QP* iDoms *Q*))
  AND (*Q* iDoms n*|N*))

```

```

print_complement: T

```

```

definition file: never.def
query: (((IP-MAT* iDominates [1]NEG*)
      AND (IP-MAT* iDoms ADVP*))
      AND (ADVP* iDoms *ADV*))
      AND (*ADV* iDoms never_adv))

```

Frequency of the *ne...but* construction:

```

query: (((IP* dominates FP*)
      AND (FP* iDominates but*|bot*))
      AND (IP* iDominates NEG*))
      AND (NEG* iDoms !not_neg))

```

Compared with the frequency of *but* without *ne*

```

query: ((IP* dominates FP*)
      AND (FP* iDominates but*|bot*))

```

D.4 Chapter Six

ME multiple negation with *never*:

```

definition file: never.def
query: ((((((IP* iDominates [1]ADVP*)
      AND ([1]ADVP* iDominates [1]*ADV*))
      AND ([1]*ADV* iDominates [1]never_adv))
      AND (IP* iDominates [2]NP*))
      AND ([2]NP* iDominates [2]*Q*))
      AND ([2]*Q* iDominates [2]n*|N*))

```

To separate clauses with and without negative markers:

```

definition file: never.def
query: ((((((IP* iDominates [1]ADVP*)
      AND ([1]ADVP* iDominates [1]*ADV*))
      AND ([1]*ADV* iDominates [1]never_adv))
      AND (IP* iDominates [2]NP*))
      AND ([2]NP* iDominates [2]*Q*))
      AND ([2]*Q* iDominates [2]n*|N*))
      AND (IP* iDoms NEG*))

```

ME multiple negation with negatively quantified NPs:

```
print_complement: T
definition file: never.def
query: ((((((IP* iDominates [1]NP*)
  AND ([1]NP* iDominates [1]*Q*))
  AND ([1]*Q* iDominates [1]n*|N*))
  AND (IP* iDominates [2]NP*))
  AND ([2]NP* iDominates [2]*Q*))
  AND ([2]*Q* iDominates [2]n*|N*))
```

To separate clauses with and without negative markers:

```
print_complement: T
definition file: never.def
query: ((((((IP* iDominates [1]NP*)
  AND ([1]NP* iDominates [1]*Q*))
  AND ([1]*Q* iDominates [1]n*|N*))
  AND (IP* iDominates [2]NP*))
  AND ([2]NP* iDominates [2]*Q*))
  AND ([2]*Q* iDominates [2]n*|N*))
  AND (IP* iDoms NEG*))
```

OE negative NPs and adverbs:

```
definition file: never.def
query: ((IP* iDominates [1]NP*|ADVP*)
  AND ([1]NP*|ADVP* iDominates [1]NEG+Q*|NEG+ADV*))
(for negative doubling add: AND (IP* iDoms NEG*))
```

OE multiple negation with negative adverbs:

```
definition file: never.def
query: (((IP* iDominates [1]ADVP*)
  AND ([1]ADVP* iDominates [1]NEG+ADV*))
  AND (IP* iDominates [2]NP*))
  AND ([2]NP* iDominates [2]*NEG+Q*))
```

OE multiple negation with negatively quantified NPs

definition file: never.def

```
query: (((IP* iDominates [1]NP*)
  AND ([1]ADVP* iDominates [1]NEG+Q*))
  AND (IP* iDominates [2]NP*))
  AND ([2]NP* iDominates [2]*NEG+Q*))
```

The incidence of *any* in negative contexts: OE:

```
query: (((((IP-SUB* iDoms [1]NP*|QP*|ADVP*)
  AND ([1]NP*|QP*|ADVP* iDoms [1]NEG*))
  AND (IP-SUB* iDoms [2]NP*|QP*|ADVP*))
  AND ([2]NP*|QP*|ADVP* iDoms [2]Q*|ADV*))
  AND ([2]Q*|ADV* iDoms +an*|+afr*|au*|aw*|ow*|ah*|en*))
```

The incidence of *any* in ME clauses with *not*:

```
define: not.def
query: (((((IP-MAT* iDominates [1]NEG*)
  AND ([1]NEG* iDominates not_neg))
  AND (IP-MAT* iDominates [2]NP*))
  AND ([2]NP* iDominates [2]Q*))
  AND ([2]Q* iDominates +an*|an*|on*|en*))
```

The incidence of *any* in ME clauses with *never*:

```
query: ((((((IP-SUB* iDoms [1]NP*)
  AND ([1]NP* iDoms [1]Q*))
  AND ([1]Q* iDoms an*|a+n*|on*|en*))
  AND (IP-SUB* iDoms [2]ADVP*))
  AND ([2]ADVP* iDoms [2]ADV*))
  AND ([2]ADV* iDoms [2]never_adv))
  AND ([2]ADVP* Precedes [1]NP*))
```

The incidence of *any* in ME clauses with negative NPs:

```
query: ((((((IP-SUB* iDoms [1]NP*)
  AND ([1]NP* iDoms [1]Q*))
  AND ([1]Q* iDoms an*|a+n*|on*|en*))
  AND (IP-SUB* iDoms [2]NP*))
```

```

AND ([2]NP* iDoms [2]Q*)
AND ([2]Q* iDoms [2]n*|N*)
AND ([2]NP* Precedes [1]NP*)

```

The frequency of negative objects intervening between a finite verb and a non-finite verb: (IP-MAT* and IP-SUB* separately)

```

query: (((((((IP-MAT* iDoms BEP*|BED*|HVP*|HVD*
|MD*|AXP*|AXD*|VBP*|VBD*)
AND (IP-MAT* iDoms NP-OB*))
AND (NP-OB* iDoms Q*)) AND (Q* iDoms n*))
AND (IP-MAT* iDoms [2]BE*|HV*|AX*|DO*|VB*|MD*))
AND (NP-OB* Precedes [2]BE*|HV*|AX*|DO*|VB*|MD*))
AND (BEP*|BED*|HVP*|HVD*|MD*|AXP*|AXD*|VBP*|VBD*
Precedes NP-OB*))

```

For objects in multiple negation with a negative marker:

```

query: (((((((((((IP-MAT* iDoms BEP*|BED*|HVP*|HVD*
|MD*|AXP*|AXD*|VBP*|VBD*)
AND (IP-MAT* iDoms NP-OB*))
AND (NP-OB* iDoms Q*)) AND (Q* iDoms n*))
AND (IP-MAT* iDoms [2]BE*|HV*|AX*|DO*|VB*|MD*))
AND (NP-OB* Precedes [2]BE*|HV*|AX*|DO*|VB*|MD*))
AND (BEP*|BED*|HVP*|HVD*|MD*|AXP*|AXD*|VBP*|VBD*
Precedes NP-OB*))
AND (IP-MAT* iDoms NEG*))

```

The frequency of non-negative quantified objects intervening between a finite verb and a non-finite verb: (IP-MAT* and IP-SUB* separately)

```

query: (((((((((((IP-MAT* iDoms BEP*|BED*|HVP*|HVD*
|MD*|AXP*|AXD*|VBP*|VBD*)
AND (IP-MAT* iDoms NP-OB*))
AND (NP-OB* iDoms Q*)) AND (Q* iDoms !n*))
AND (IP-MAT* iDoms [2]BE*|HV*|AX*|DO*|VB*|MD*))
AND (NP-OB* Precedes [2]BE*|HV*|AX*|DO*|VB*|MD*))
AND (BEP*|BED*|HVP*|HVD*|MD*|AXP*|AXD*|VBP*|VBD*
Precedes NP-OB*))

```

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