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Negative inversion, negative concord and sentential negation in the history of English[1]

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It is claimed in van Kemenade (2000: 62) that clauses with initial negative constituents are a context in which subject–verb inversion occurs throughout the history of English. However, different patterns of negative inversion are seen at different periods of English. I argue that changes in the availability of negative inversion reflect changes in the way sentential scope for negation is marked in negative concord constructions. Thus, negative concord involving Middle and Early Modern English *not* does not co-occur with negative inversion, but negative concord involving Middle English *ne* does. Changes to negative inversion can be seen to parallel changes in the way sentential scope negation is expressed at successive stages of the Middle English Jespersen Cycle. I propose that the changes to negative inversion and Jespersen's Cycle should both be analysed as changes in the ability of negative items to mark sentential scope for negation. This observation can be formalised within a Minimalist framework as variation in the LF-interpretability of negative features, following the account of Jespersen's Cycle proposed by Wallage (2008).

1 Introduction

It is claimed in van Kemenade (2000) that clause-initial negatives are a context for subject–verb inversion throughout the history of English. It is certainly easy to find examples of such inversion. (1) and (2) illustrate the two types that existed in early English. The first type involves a marker of clausal negation in initial position, as in the Early Middle English example (1). The second type involves other negative words, such as the conjunction *nor* in the Early Modern English example (2).

(1) **Ne** mei þe deofle þa sunne iwiten þa ʒet er þu habbe
    NEG may the devil the sin know then yet until you have
    heo idon mid þe licome
    it done with the body
    'The devil may not be aware of the sin nevertheless until you have committed it
    with your body'   (thirteenth century; CMLAMBX1,21.242) [2]

(2) **Nor** did he use those obligations ill, that love had done him
    (seventeenth century; BEHN-E3-H,156.13)

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[2] For each example, the approximate date is given, along with the precise reference to the relevant corpus (for which see the description following in the main text). The dates are those given in the corpus documentation and are the manuscript dates, not necessarily the dates of composition.

The patterns in (1) and (2) each have distinct histories. Ingham (2005) discusses the history of the pattern in (1). This article discusses the emergence of the pattern in (2). Corpus data show that the pattern in (2) arises during the Middle English period (1150–1500). Unlike other accounts (Nevalainen 1997; Ingham 2007), I will propose an analysis that extends to negative inversion in both Middle English (1150–1500) and Early Modern English (1500–1700). Under the analysis to be proposed, changes to negative inversion follow from more general changes to the scope properties of negative items. Specifically, I propose to account for changes in negative inversion using the Minimalist distinction between LF-interpretable and LF-uninterpretable features of lexical items. As I will show, this account unifies changes to negative inversion with the account of Jespersen's Cycle proposed by Wallage (2008).

The data for this article come from a series of diachronic corpora. For the Early Modern English data I have used the *Penn–Helsinki Parsed Corpus of Early Modern English* (Kroch, Santorini & Delfs 2004) and the *Parsed Corpus of Early English Correspondence* (Taylor *et al.* 2006). The Middle English data come from the prose texts in the *Penn–Helsinki Parsed Corpus of Middle English* (2nd edition) (Kroch & Taylor 2000). The Old English data are taken from the *York Corpus of Old English Prose* (Taylor *et al.* 2002). These corpora are all tagged for parts of speech and syntactically parsed at the clause level, allowing syntactic constructions to be searched for electronically using *CorpusSearch* (Randall 2000). All examples cited and quantitative data given come from exhaustive searches of the prose texts in these corpora.

In section 2, I present corpus data showing the emergence of new patterns of negative inversion in Middle English (1150–1500) and Early Modern English (1500–1700). Section 3 turns to syntactic accounts of negative inversion in earlier English (Nevalainen 1997; Ingham 2007) and Present-day English (Haegeman 2001). Nevalainen (1997) and Ingham (2007) link the rise of new patterns of negative inversion in earlier English to the loss of negative concord. However, in section 4, I present corpus data showing that the new patterns of negative inversion do not correlate with the loss of negative concord. Instead, I propose that they result from changes in the way sentential scope for negation is marked in negative concord constructions. Sections 5 and 6 formalise this idea using the distinction between LF-interpretable and LF-uninterpretable features available in Minimalist frameworks such as Chomsky (2000). Section 7 discusses some implications of this proposal for the syntax of negative concord and the syntax of negative markers.

2   Negative inversion in early English

2.1   Distinguishing negative inversion from other types of inversion in the history of English

Since Old and Middle English had various types of inversion, it is necessary to focus the analysis on those cases in which the inversion is triggered not just by the presence

of a clause-initial element, but by the presence of an initial negative element. The two distinct types of inversion that existed in Old and Middle English are: (i) inversion of a finite verb with a full nominal subject, as in (3); (ii) inversion of the finite verb with a pronominal subject, as in (4). The subjects are in bold in (3) and (4).

(3) Ðas gifu sealde **seo ceasterwaru** on Tharsum Apollonio þam tiriscan
This gift gave   the citizens   in Tharsus Apollonius the Tyrian
'The citizens of Tharsus gave this gift to Apollonius the Tyrian'
(eleventh century; Apollo 16.10.16, Haeberli (2002a: 88, ex.1))

(4) Ne eom **ic** wod
NEG am I mad
'I am not mad'
(eleventh century; wsgosp,Jn_[WSCp]:8.49.6472)

To explain the difference, Haeberli (2002a,b) argues that subject pronouns and full nominal subjects occupy different positions in the clause: subject pronouns appear in spec,AgrP, while full nominals appear in a lower position, i.e. spec,TP. (5) shows the structure of the negative inversion example (4), with *ic* 'I' in spec,AgrP.

(5)

```
                    CP
                    /\
                      C′
                     /\
                  C    AgrP
                  |    /\
        Ne eom_i  NP      Agr′
                  |      /\
                 ic_j  Agr    TP
                       |      /\
                      t_i   t_j   T′
                                 /\
                               T    VP
                               |    /\
                              t_i  t_j   V′
                                        /\
                                      V    AdjP
                                      |     /\
                                     t_i   wod
```
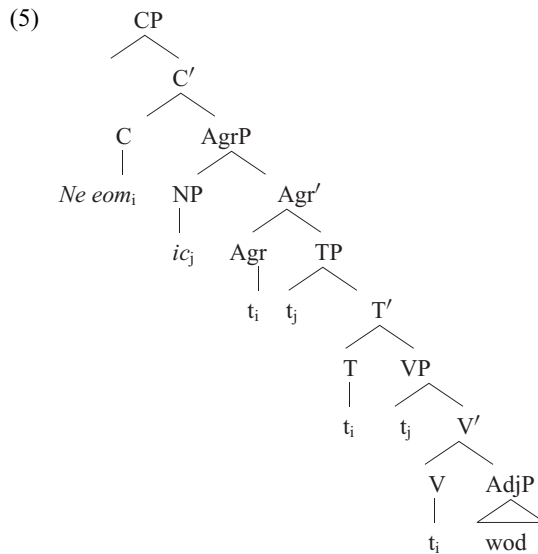
Negative inversion, as in (4), inverts a finite verb and a subject pronoun. Haeberli (2002a) and Pintzuk (1999) analyse cases like this as having the finite verb in C^0, where it precedes the subject pronoun, as shown in (5). In contrast, verb movement in affirmative main clauses, like (3), is typically to Agr^0. Such V-to-Agr movement does not invert a finite verb and pronominal subject, but it does invert a finite verb and a full nominal subject in spec, TP. [3] Therefore, in Old English and also in much of

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[3] Some affirmative clauses do have inversion of a finite verb and a pronominal subject, particularly those which have the clause-initial adverbs *þa* or *þonne* 'then', or are subjunctives (see Pinztuk 1999: 90–1 for examples). Like clauses with initial negatives, these can be analysed as exhibiting V-to-C movement (Pintzuk 1999: 90–1).

Middle English, we can only distinguish negative inversion (V-to-C movement) from V-to-Agr movement in clauses with pronominal subjects. Hence this article examines only clauses with pronominal subjects.

2.2   Two patterns of negative inversion in early English

It has been claimed that there have been two broad changes to inversion during the history of English: the loss of inversion with *ne* in the thirteenth century (Ingham 2005) and the emergence of inversion with other negatives, which Nevalainen (1997) dates to the sixteenth century.

The first pattern, found in Old English and Middle English, involves the negative marker *ne* in clause-initial position, as in (4) and (6).

(6) (a) **Ne**   forgife ic eow swa swa þes middaneard forgifð
          NEG   forgive I   you so   as   this world   forgives
          'I do not forgive you as this world does'
          (tenth century; aelhom,+Ahom_10:15.1413)

     (b) **Ne**   hafst tu   næure soðe eadmodnesse on þe . . .
          NEG   have   you   never true humility   in you . . .
          'You never have true humility in you . . .'
          (thirteenth century; VICES1,33.398)

Until the twelfth century, *ne* is the typical marker of sentential scope negation and often negates a clause on its own. Structurally, we can analyse *ne* as a head affixed or cliticised to the finite verb. It virtually always appears immediately preceding the finite verb, irrespective of the latter's position within the clause. When *ne* appears in clause-initial position, the finite verb prefixed by *ne* moves to C^0 because of its negative force.

During the thirteenth century, *not* becomes grammaticalised as a negative marker, before *ne* is lost in the fourteenth and fifteenth centuries. Ingham (2005) links the loss of the inversion pattern in (4) and (6) to the grammaticalisation of *not* as a sentential negative marker in the thirteenth century. This fits with an analysis which links negative inversion to negative force. Ingham proposes that until the thirteenth century, *ne* is sufficient to mark negative force on its own. During the thirteenth century, *not* is grammaticalised as a negative force marker. He argues that this causes *ne* to lose its negative force, so it can no longer move to C^0. In what follows, I adopt this analysis for the loss of (4)/(6).

The second pattern of negative inversion follows other clause-initial negative items, such as negative adverbs in (7a), negative NPs in (7b) and negative conjunctions in (7c).

(7) (a) **never** took he giftes of man
          never   took he gifts   of man
          'Never did he take gifts of man'
          (fifteenth century; CAPHR,54.666)

Table 1. *The frequency of the negative marker* ne
preceding a subject pronoun[4]

Period	V su	Total	% V su
850–950	305	450	67.8%
950–1050	1020	1465	69.6%
1050–1150	253	389	65.0%
1150–1250	132	511	25.8%
1250–1350	20	302	6.6%
1350–1420	12	149	8.7%
1420–1500	0	17	–

(b) and **no wepyn**   coude he fynde
    and no weapon could   he find
    'and no weapon could he find'
    (fifteenth century; MALORY,64.2150)
(c) **Nor** did he use those obligations ill that love had done him
    (seventeenth century; BEHN-E3-H,156.13)

This is the antecedent of the Present-day English pattern. Nevalainen (1997) and Ingham (2007) date its emergence to the sixteenth century. However, data from the PPCME2 provide evidence of this pattern as early as the thirteenth century. An example is given in (8). This pattern is discussed in detail in section 3.

(8) **for nan deofles puf**   ne   þurðe ye   dreden
    for no   devil's breath NEG need   you fear
    'You need not fear any devil's breath'
    (thirteenth century; ANCRIW,II.168.2326)

2.3   *The diachrony of negative inversion in early English*

In order to obtain full data on the frequency of the various types of negative inversion in main clauses from the twelfth to the seventeenth century, I carried out an exhaustive search of the corpora described in section 1. Table 1 examines the position of the negative marker *ne* in relation to the subject in main clauses with pronominal subjects. When *ne* precedes the subject pronoun, as in (9), the finite verb to which *ne* is procliticised always moves to a position preceding the subject pronoun, C^0, resulting in subject–verb inversion.

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[4] The sources for this and all following tables are the historical corpora listed in section 1. Where an Early Modern example appears in both the PPCEME and PCEEC corpora, it is counted only once.

Table 2.   *The frequency of inversion following different clause-initial negative items (excluding clear cases of constituent negation)*

	Negative arguments and adverbials			Negative conjunctions (*neither, ne, nor*)		
Period	V su	Total	%	V su	Total	%
850–950	2	6	33.3%	0	35	0.0%
950–1050	5	22	22.7%	2	203	1.0%
1050–1150	3	5	60.0%	2	48	4.0%
1150–1250	8	9	88.9%	9[5]	27	33.3%
1250–1350	0	0	–	1	18	5.6%
1350–1420[6]	7	14	50.0%	4	50	8.0%
1420–1500	9	11	81.8%	7	34	20.5%
1500–1570	14	23	60.9%	36	81	44.4%
1570–1640	24	31	77.4%	223	235	94.9%
1640–1710	2	3	66.7%	159	169	94.1%

(9) **ne**   scealt ðu þone rihtwisan ofslean mid arleasan
     NEG ought you the   righteous kill   with the-wicked
     'You ought not kill the righteous person with the wicked'
     (tenth/eleventh century; aelive,+ALS[Pr_Moses]:193.2965)

The table confirms Ingham's (2005) finding that the frequency of subject–verb inversion involving the negative marker *ne* declines steeply during the twelfth and thirteenth centuries. After the twelfth century, *ne* is most often found in a position following the subject, indicating that the position of *ne* plus finite verb is lower, Agr^0 in terms of Haeberli (2002a,b).

However, *ne* is not the only negative which may appear with subject–verb inversion in early English. Table 2 gives the frequency of inversion of a finite verb and a subject pronoun in two more environments: following a clause-initial negative argument or adverbial, as shown in (10); and following a clause-initial negative conjunction, as in (11).

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[5] This relatively high number seems to be due to odd behaviour in two texts, the *Ancrene Riwle* and *St Juliana*. These examples may have subjunctives. If so, inversion in these clauses may be independent of the initial negative conjunction.

[6] Tokens from the *Rule of St Benet* are excluded. Kroch & Taylor (1997: 313) propose that this text has generalised V-to-C movement in all main clauses. It is not possible to distinguish negative inversion from generalised V-to-C movement according to the relative position of a finite verb and subject pronoun. The reason is that, in all clauses with an initial element that is not the subject, the finite verb will precede a subject pronoun.

(10) (a) and **no defaute** fond þei   in hir feith . . .
            and no fault   found they in her faith
            'No fault did they find in her faith'
            (fifteenth century; CAPCHR,159.3739)
      (b) and **never** shall I returne unto the courte agayne tylle I have sene
            it more opynly than hit hath bene shewed here
            'and never shall I return to the court again until I have seen it
            more openly than it has been shown here'
            (fiftheenth century; MALORY,635.3785)
(11) **nor** are they of any religion at all
      (seventeenth century; VERTE-E2-P2,47.191)

   Table 2 shows that inversion following negative arguments and negative adverbials
appears considerably earlier than the sixteenth century, which is the period to which
Nevalainen (1997) dated their emergence. There are some examples in Old English and
their number increases during Middle English. Despite a certain amount of variation in
their frequency in different texts and at different periods, negative inversion following
negative arguments and negative adverbials seems to become established during the
twelfth and thirteenth centuries. However, inversion following the negative conjunctions
ne and *nor* does not become the norm until the late sixteenth or even seventeenth
century. It is possible that a predominance of clauses with negative conjunctions in the
Early Modern English data used by Nevalainen (1997) led her to propose that negative
inversion of the Present-day English type emerges in the sixteenth and seventeenth
centuries. Table 2 shows that the development of negative inversion involves a process of
diffusion. It is established much earlier with negative arguments and negative adverbials
than with negative conjunctions. Thus, the frequency of inversion at any particular date
is determined by the category of the clause-initial negative item.

3   The relationship between negative inversion and negative concord

3.1   Nevalainen (1997)

Nevalainen (1997) observes that the rise of negative inversion, as in (12a), is at odds
with a more general decline in inversion following clause-initial adverbs such as *yet* in
affirmative declarative clauses, as in (12b).

(12) (a) Nor never longed I since I came hether to set my fote in mine owne howse.
            'Nor never longed I since I came here to set my foot in my own house'
            (CEEC, THOMAS MORE 543, Nevalainen (1997, 206, ex.11))
      (b) yet will I forbear till it shall please god in mearcy to scease it
            'yet will I forbear till it shall please God in his mercy to make it cease'
            (CEEC, KATHERINE PASTON 84, Nevalainen (1997, 206, ex. 6))

   Nevalainen (1997: 212) claims that the establishment of the pattern in (12a) is a
consequence of the loss of negative concord. Until the sixteenth century, English is a

negative concord language: a clause has a sentential negative reading irrespective of how many negative words it contains, as shown in example (13).

(13) We   might **not** make **no**   **sale** in Christmasse week
      We   might not   make no   sale in Christmas   week
      'We might not   make any   sale in Christmas   week'
      (sixteenth century; TORKINGT-E1-H,58.328)

(13) contains two negative words: *not* and *no*, but until the sixteenth century such a clause would have negative force as a whole. In contrast, a Present-day standard English interpretation of the clause would be that we *will* make a sale in Christmas week ('it is not possible that we will not'), where the force of each negative word cancels out the other to give an affirmative reading. According to Nevalainen (1996), the loss of negative concord largely took place in the sixteenth century. Nevalainen (1997: 212) capitalises on this fact by proposing that negative concord and negative inversion are mutually exclusive ways to mark sentential scope for negation in the sixteenth-century data. This would mean that the loss of negative concord allowed negative inversion to establish itself.

3.2   Ingham (2007)

Ingham (2007: 380) makes a similar observation, that negative inversion and negative concord are incompatible. He accounts for this incompatibility by adopting Zeijlstra's (2004) idea that negative concord requires the functional projection NegP. Specifically, Ingham (2007) proposes that negative concord between *not* in spec,NegP and a negative item within VP blocks movement of the negative item to spec,CP across spec,NegP *not*. In earlier periods, we find negative concord between a negative item and the negative head *ne*, as in (14).

(14) he **ne**   cnaweð **nan** **mon**
      he NEG   knows   no   man
      'He knows no man'
      (thirteenth century; ANCRIW,II.97.1168)

In such clauses Ingham (2007: 380) claims that spec,NegP is occupied by a null negative operator which licenses *ne* in Neg_0 and marks sentential scope for negation. Just as in clauses with the negative operator *not,* the null negative operator in spec,NegP blocks the movement of a negative item to spec,CP, as shown in (15).

(15) $[_{\text{NegP}}$ *not*/NegOp NEG^0 $[_{\text{VP}} \dots$ negXP $\dots$]]

           $\longleftarrow\!\!-\!\!\text{X}\!\!-\!\!\!\longrightarrow$

   Ingham (2007) therefore predicts that negative inversion will be absent from all stages of English which have negative concord. However, this prediction is not correct:

Table 3. *Frequency of inversion and negative concord in clauses with an initial negative element in Early Modern English (1500–1710)*[7]

	Negative inversion	Total	% negative inversion
Negative concord with *not*	3	39	7.7%
Without negative concord	455	484	94.0%
TOTAL	458	523	87.6%

data from Middle English show that negative inversion and negative concord are not always in complementary distribution.

3.3 Negative inversion and negative concord in corpus data

Both Nevalainen (1997) and Ingham (2007) propose that the loss of negative concord is a prerequisite for the establishment of negative inversion. However, negative inversion following negative arguments and negative adverbials becomes established during the twelfth and thirteenth centuries while negative concord is still productive and frequent. Figures for the period 1250–1350 show that in 90 per cent (n = 127/141) of clauses involving a negative argument in this period, the negative argument is in negative concord with *ne.* One example from among many is given in (16).

(16) Uor **non ne** may habbe uoryeuenesse wyþ-oute zoþe ssrifte
For none NEG may have forgiveness without true shrift
'For none may have forgiveness without true shrift'
(fourteenth century; AYENBI,33.541)

More careful analysis shows that there are two different kinds of negative concord in English. One of these co-occurs with negative inversion from the thirteenth century onwards, but the other does not. First, I present data from the Early Modern English period. Table 3 takes all main clauses with initial negative constituents (conjunctions, arguments and adverbials). It compares the frequency of negative inversion in clauses which have negative concord involving *not*, such as (17), against clauses without negative concord, like (18).

(17) (a) No more we shan't indeed
'No more shall we indeed'
(seventeenth century; VANBR-E3-H,62.623)
 (b) Nor it were not best for themselves
'Nor were it best for themselves'
(sixteenth century; LATIMER-E1-H,37L.340)

[7] These data are a subset of the data in table 2. Both the PPCEME and PCEEC corpora are used, but clauses which have negative concord that involves negative items other than *not* – for example between two negative arguments or a negative argument and a negative adverb – are excluded here.

(18) nor can I by any means say against it
      'nor can I by any means speak against it'
      (seventeenth century; BOETHPR-E3-H, 135.108)

These data show a clear opposition between negative inversion and negative concord: they co-occur in only three instances, one of which is given in (19), accounting for 7.7 per cent of all clauses with negative concord.

(19) no more would not I if I was your wife
      'no more would I if I was your wife'
      (seventeenth century; PENNY-E3-H,267.501)

Thus, where the clause-initial negative enters into negative concord with *not*, inversion typically does not occur, as shown in (17). In clauses without negative concord, on the other hand, inversion is frequent, as in (18).

While we find that negative concord is largely incompatible with negative inversion in Early Modern English, the same is not true in Middle English clauses with initial negative arguments or adverbials. In this period, inversion following these negatives typically occurs whether or not the clause also exhibits negative concord, as shown in (20), without negative concord, and (21), with negative concord.

(20) (a) and **never** schal he seese for to do it
           and never shall he cease for to do it
           'and never shall he cease to do it'
           (fifteenth century; CLOUD,19.102)

      (b) and **no defaute** fond þei in hir feith . . .
           and no fault   found they in her faith
           'and they found no fault in her faith'
           (fifteenth century; CAPCHR,159.3739)

(21) (a) **never ouer .xii. monþe nis**   hit undon
           never over 12   months NEG-is it   undone
           'it is never undone over 12 months'
           (thirteenth century; LAMBX1,5.32)

      (b) **Nouther hwit ne blac ne**   nemmet he in his ordre
           Neither   white nor black NEG names   he in his order
           'He does not name in his order either white or black'
           (thirteenth century; ANCRIW,I.48.84)

      (c) and **nothing ne** shal they fynden in hir handes of all hir   tresor
           and nothing NEG shall they find   in their hands of all their treasure
           'and they shall find none of their treasure in their hands'
           (fourteenth century; CTPARS,292.C1.156)

In this period, there is a high frequency of inversion following a clause-initial negative argument such as *nothing* or a negative adverbial such as *never*, irrespective of the presence or absence of negative concord with a negative marker like *ne* or *not*. Full figures are given in table 4.

In Middle English, negative concord typically involves the negative marker *ne*. Table 5 shows that in all but one of the Middle English main clauses in which inversion

Table 4. *Inversion following a clause-initial negative argument or adverbial in the prose texts in the PPCME2 corpus (Middle English, 1150–1500)*

	Negative inversion	Total	% negative inversion
Negative concord	10	15	66.7%
Without negative concord	13	17	76.5%
TOTAL	23	32	71.9%

Table 5. *Negative inversion with different types of negative concord in Middle English (1150–1500)*

		Negative inversion	Total	% negative inversion
Negative Concord with:	*ne*	9	13	69.2%
	ne and *not*	0	0	–
	not	1	2	50.0%
Without negative concord		13	17	76.5%
Total		23	32	71.9%

and negative concord co-occur, the negative concord is between a clause-initial negative item and the word *ne*, as illustrated by all three examples in (21). The only example in which negative inversion co-occurs with *not* is given in (22).

(22) and for **non oþer þing** is it **not** good
      and for no   other thing is it not   good
      'and it is not good for anything else'
      (fifteenth century; CMMANDEV,83.2101)

In Old English, whenever we have a clause-initial negative argument or adverbial, it always appears in multiple negation with *ne*. However, Old English *ne* and Middle English *ne* differ with respect to inversion. While negative inversion may follow initial negative items which are in concord with Old English *ne*, as in (23), it is only found in 30.3 per cent (n = 10/33) of all cases. Hence non-inversion, as in (24), is more typical.

(23) &   **nan þing ne** spræc he butan bigspellum
      and no   thing NEG spoke he except stories
      'And he uttered nothing except stories'
      (eleventh century; wsgosp,Mt_[WSCp]:13.35.870)
(24) (a) **nan þing** he **ne**   answarode
          no   thing he NEG answered
          'he did not give any answer'
          (eleventh century; wsgosp,Mt_[WSCp]:27.12.2014)
      (b) **nænne** he **ne** fordemde
          none   he NEG judged
          'he judged none'
          (tenth/eleventh century; aelive,+ALS_[Martin]:302.6153)

This section has shown that there are two types of negative concord in early English. When negative concord involves the Middle English and Early Modern English negative

marker *not*, there is typically no inversion following a clause-initial negative. The Old English negative marker *ne* behaves in a way similar to *not* with respect to negative inversion. However, when negative concord involves the negative marker *ne* in Middle English*, a clause-initial negative typically triggers subject–verb inversion. In section 5, I will argue that these differences correspond to changes in the scope properties of negative items at successive stages of Jespersen's Cycle. But before turning to this, it is first necessary to present some of the formal devices that have been argued to play a role in negative inversion in general.

4   Negative inversion and scope

A very influential analysis of negative inversion in Present-day English was proposed in Haegeman (1995). She presents a formal analysis of inversion facts and, importantly, also points out that initial negatives do not always trigger inversion. She links this to differences in the scope of the initial negative item. After discussing some of the details of her analysis, I will argue that the presence or absence of negative inversion in earlier English provides a useful clue to the nature of negative elements in the relevant periods.

4.1   Negative inversion and scope in Present-day English

A central component of Haegeman's (1995) analysis is the Neg-criterion, given in (25). Basically, it states that a negative operator in a specifier position requires a negative element in the associated head position and vice versa.

(25) *The Neg-criterion (Haegeman 1995: 106)*
     (a) A NEG-operator must be in a Spec-Head configuration with an X-[NEG].
     (b) An X-[NEG] must be in a Spec-Head configuration with a NEG-operator.

As negative operators, negatives in spec,CP are subject to the Neg-criterion. This means that an X-[NEG] must appear in C^0. According to Haegeman (1995: 180–1), this is the reason why the verb has to move to C^0 when there is a clause-initial negative operator. However, it is clear that in Present-day English not all clause-initial negative constituents trigger inversion. Haegeman (1995, 2001) links the ability of initial negatives to trigger subject–verb inversion to their scope. Negatives whose negation takes sentential scope trigger subject–verb inversion, as in (26a), but those whose negation takes constituent scope, as in (26b), do not.

(26) (a) With no job would Mary be happy
      (= Mary wouldn't be happy with any job)
      (Haegeman 2001: 21, ex. 1a)
   (b) With no job, Mary would be happy
      (= Mary would be happy without a job)
      (Haegeman 2001: 21, ex. 1b)

Haegeman (2001: 31–2) shows that the examples in (26) contrast in other ways which indicate differences in the scope of their negation (sentential scope in (26a), constituent scope in (26b)). Thus, sentential negative clauses take positive tags, while clauses with

constituent negation take negative tags, as (27) shows. Furthermore, sentential scope negation licenses the polarity items *ever, any*, but constituent scope negation does not, as shown in (28).

(27) (a) Mary would be happy with no job, would she?
    (b) With no job, Mary would be happy, wouldn't she?
(28) (a) With no job would she ever be happy
        (Haegeman 2001: 32, ex. 35b)
    (b) *With no job, she would ever be happy
        (Haegeman 2001: 32, ex. 35b)

Haegeman (2001: 21) proposes that clause-initial sentential scope negatives are focus-operators while clause-initial constituent scope negatives are topics. She adopts a split CP structure: topicalisation is movement to spec,TopicP and focalisation movement to spec,FocusP. The clause-initial negative is subject to the Focus-criterion when it is a focus operator, but not when it is a topic. Haegeman claims that the finite verb is an X-[focus], and therefore the focus criterion, (29), results in subject–verb inversion since the finite verb moves to the head of FocusP, a position higher than the subject, which occupies spec,TP. In contrast, topicalisation does not trigger movement of T^0 to Topic^0.

(29) *The focus-criterion (Haegeman 2001: 23)*
      (a) A FOCUS-operator must be in a spec-head configuration with an X-[FOCUS]
      (b) An X-[FOCUS] must be in a spec-head configuration with a focus operator.

Clearly, we need to maintain a distinction between the behaviour of negatives with and without sentential scope. However, it is difficult to express this in terms of topic/focus, since clause-initial negatives behave differently from other clause-initial focalised constituents. In English, a clause-initial negative is followed by subject–verb inversion, as in (26a), but other clause-initial focalised constituents like *Your book* in (30a) are not. The focalised constituent *Your book* in (30a) is only distinguished from the topic *Your book* in (30b) by intonation, not the position of the verb.[8]

(30) (a) YOUR BOOK$_i$ you should give t$_i$ to Paul, (not mine)
        (Haegeman 2001: 33, ex. 41a)
    (b) Your book$_i$, you should give t$_i$ to Paul, (not to Bill)
        (Haegeman 2001: 33, ex. 41b)

In addition, Ingham (2007) points out that the movement of sentential scope negative phrases to spec,CP is not likely to involve focalisation since contrastive focus in English 'falls towards the end of the clause' (Ingham 2007: 380). Hence, he concludes that clause-initial negatives are not focus operators in English. Instead, he proposes that clause-initial sentential scope negatives move to spec,CP to check a force feature on C^0. This force feature is optionally available to mark strongly emphatic negative force.

---

[8] This intonational difference is represented in (30a) by capitalisation of the focalised constituent, indicating that it bears heavy stress.

4.2   Negative inversion and the scope properties of negative markers
in earlier English

If Haegeman (2001) is right in proposing that negative inversion only follows an initial negative item when it marks sentential scope negation, then negative inversion can be used as a diagnostic for the nature of negative elements. In particular, an inversion-inducing initial negative has sentential scope, hence any further negative elements in the clause are concordant negatives rather than negative scope-markers themselves. For Middle English and Early Modern English, this means that the occurrence of negative inversion can tell us something about the words *ne* and *not*. For example, since (31) has negative inversion, the clause-initial negative constituent *naure* 'never' must mark sentential scope for negation. The fact that *ne* appears in negative concord with it indicates that *ne* lacks negative force of its own.

(31) Ac naure ne   geseige we manne þæt hadde þese hali mihte mid
     But never NEG saw   we man   that had   this holy virtue with
     him, þat he aure misferde
     him, that he ever fared-badly
     'But we never saw that a man who had this holy virtue with him ever fared badly'
     (thirteenth century; CMVICES1,149.1871)

In (32), on the other hand, the clause-initial negative item does not mark sentential scope negation, hence the lack of negative inversion following it. Instead, it is the negative marker *not* that endows the clause with negative force.

(32) nor I do not care
     'nor do I care'
     (seventeenth century; LISLE-E3-H,IV,123C1.502)

In this way, the presence or absence of negative inversion can be used to argue that *ne* and *not* do not have the same status in Middle English. There is in fact other evidence to distinguish *ne* and *not* in Middle English in terms of negative force. This can be found in the Middle English change in sentential negation known as Jespersen's Cycle (Jespersen 1917), in which the negator *ne* comes to be supplemented by *not* in early Middle English, as in (33), before *ne* is lost. Wallage (2008) interprets the existence of sentences like (33) as evidence that *ne* often lacks negative force from the twelfth century onwards. Thus, Middle English *ne* is no longer sufficient to mark negative force at LF on its own, hence its co-occurrence with *not*.

(33) Thou ne   hast nat doon to hym swich honour and reverence as thee
     You   NEG have not done to him such honour and reverence as you
     oughte
     ought
     'You have not shown him such honour and reverence as you ought to have'
     (fourteenth century; CMCTMELI,229.C2.477)

Sections 5 and 6 account for the changes to negative inversion described in section 3 using the same mechanism of morphosyntactic feature change that Wallage (2008) proposed to account for Jespersen's Cycle. Section 5 outlines the syntactic assumptions.

Section 6 describes the hypothesis and its application to the early English negative inversion data.

5   Preliminaries to a syntactic hypothesis
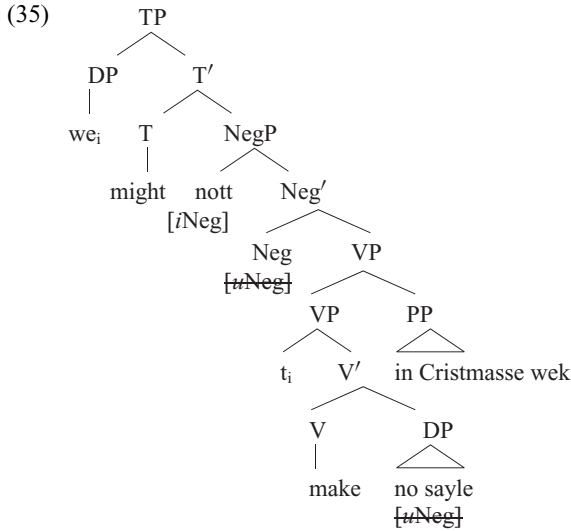
5.1   Syntactic assumptions

I will argue that changes in negative inversion arise from differences in the scope properties of negative items in negative concord with *ne* and *not*. The changes will be formalised within a Minimalist syntactic framework. In this framework (Chomsky 1999, 2000), lexical items are specified in the lexicon with morphosyntactic features, which drive syntactic operations. Features are either semantically interpretable [iF] or semantically uninterpretable [uF]. Interpretable features are semantically interpreted at LF and contribute meaning to the clause. Thus, at LF, an interpretable [iNeg] feature will mark the scope of negation.

Uninterpretable features [uF] have a purely formal role in triggering syntactic operations. They must be checked by External or Internal Merge, or by Agree and then must be deleted prior to LF. External merge takes a lexical item from the lexicon and adds it to the derivation. Internal merge and Agree establish relationships between a head with [uF] and an element already in the syntactic derivation with a matching [iF]. A feature [uF] on the head will be checked by a matching feature that it c-commands. Applying this to negation, a [uNeg] feature will probe for an [iNeg] feature within the already constructed derivation. In the case of internal merge, the item bearing the [iNeg] feature will move to become the specifier of the head which bears the [uNeg] feature. If C^0 has an uninterpretable negative feature [uNeg] checked by internal merge, an item with an interpretable [iNeg] feature will move to spec,CP. In the case of Agree, the [uNeg] feature of the head will be checked without any movement.

5.2   Deriving negative concord and negative inversion

Zeijlstra (2004) and Wallage (2005) derive negative concord using the mechanism of Multiple Agree proposed by Hiraiwa (2001). The uninterpretable formal features on negative items are valued by multiple agreement during the syntactic derivation by a negative marker which has a semantically interpretable negative feature. When a uninterpretable [uNeg] feature on a functional head such as Neg^0 or C^0 is checked against a semantically interpretable [iNeg], Multiple Agree will simultaneously check and delete all the matching uninterpretable [uNeg] features c-commanded by that head within the clause. An example can be seen in (35), which is part of the derivation for the sentence in (34). [uNeg] on the negative head Neg_0 is the probe. Merge of *not* [iNeg] in spec,NegP checks and deletes all the [uNeg] features in the clause, on both Neg^0 and on the DP *no sayle*. In (35) and all the derivations that follow, deleted features are distinguished by the use of strike-through.

(34)   we myght nott make no sayle in Cristmasse wek
   we might not make no sale in Christmas week
   'We might not make any sale in Christmas week'
   (sixteenth century; TORKINGT-E1-H,58.328)

(35)

```
                    TP
                  /    \
                DP      T′
                |      /  \
               weᵢ    T    NegP
                      |    /   \
                    might nott  Neg′
                         [iNeg] /   \
                              Neg     VP
                            [̶u̶N̶e̶g̶]  /  \
                                   VP    PP
                                  /  \    ⟋\
                                 tᵢ   V′  in Cristmasse wek
                                     /  \
                                    V    DP
                                    |    ⟋\
                                  make  no sayle
                                       [̶u̶N̶e̶g̶]
```

In general terms, Zeijstra (2004: 243ff.) argues negative concord languages must have an uninterpetable [*u*Neg] feature on a functional head in order to establish Multiple Agreement. He proposes this head is Neg⁰. By extension, he argues that the presence of Neg⁰ distinguishes languages which allow negative concord from those which do not. I adopt this analysis here.

Turning now to the derivation of examples with negative inversion, (36) shows an example derivation of the Present-day English sentence given earlier as (26a). *With no job* starts out as a VP-adjoined adverbial and moves to spec,CP to check the [*u*Neg] feature on C⁰.

(36)

```
                       CP
                     /    \
                   PP       C′
                  ⟋\       /  \
          With no jobᵢ    C    TP
              [iNeg]    [̶u̶N̶e̶g̶]  / \
                        [̶u̶T̶]  Maryₖ  T′
                              /      /  \
                          wouldⱼ    T    VP
                            [iT]    |   /  \
                                    tⱼ  VP   tᵢ
                                       /  \
                                      tₖ   V′
                                          /  \
                                         V    AdjP
                                         |    ⟋\
                                        be   happy
```
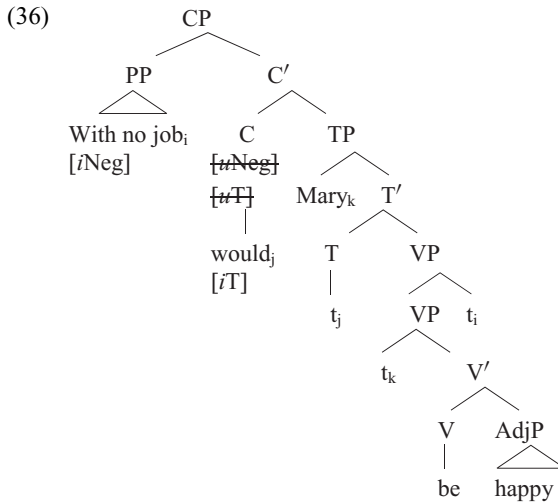
In a feature-driven syntax, we are required to say that overt movement of a negative phrase to spec,CP is triggered by the presence of the feature [uNeg] in C^0. When there is a negative operator in spec,CP, there must be a finite verb in C^0. Hence overt T-to-C movement takes place. In (36), I postulate the presence of a [uT] feature on C^0 that will trigger this T-to-C movement.[9]

6   Syntactic hypothesis: the relationship between inversion, negative concord and sentential negation

Adopting the analysis sketched above, I now turn to the relation between negative inversion and the morphosyntactic feature specification of negative items in the history of English. I propose that negative items undergo change in their specification during Middle English. This affects both their ability to co-occur with negative inversion and their ability to appear in negative concord with different negative markers. The difference between historical stages of English with and without negative inversion reduces to the semantic interface interpretability of the negative features on the clause-initial negative items. Only negative items with a semantically interpretable [iNeg] feature count as negative operators, so only these spec,CP negative operators require a finite verb to move to C^0. Negative items with uninterpretable [uNeg] features I analyse as topics in spec,CP. This follows Haegeman's (2001: 34) analysis of non-inversion following clause-initial negatives in Present-day English. Negatives which have [uNeg] features can move to spec,CP but cannot check a [uNeg] feature on C^0 because they lack inherent negative force.

   Clause-initial concordant negatives may appear with another negative item which is itself the semantically interpretable marker of sentential scope negation within the clause. In these cases, the clause-initial negative item lacks negative force, and has an uninterpretable [uNeg] feature. As a consequence, such concordant negative items are not negative operators and will not trigger negative inversion. This analysis predicts different frequencies of negative inversion in clauses with and without negative concord. The frequency of negative inversion should be lower in negative clauses which have negative concord than it is elsewhere, since it is possible that the clause-initial negative item in negative concord constructions is not a marker of sentential scope negation. In the next subsection, I propose to refine this analysis by distinguishing two types of negative concord, one involving Middle English *ne* which co-occurs with negative inversion, the other involving Middle English and Early Modern English *not* which does not.

---

[9] Unlike the Neg-criterion approach (Haegeman 1995: 106), I do not assume that there is spec–head agreement between two negative elements in CP. It is not clear in Present-day English that the finite verb in a negative clause is in any sense negative (an X-[neg], in Haegeman's terms). It must be admitted that the approach I postulate here involving the [uT] feature is also stipulative. Clearly further work on the syntax of this type of construction is needed.

6.1   The relationship between negative inversion and changes in marking sentential scope negation

Wallage (2008) argues for a change in the morphosyntactic features associated with negative markers in the Middle English period. Negative marking undergoes a three-stage development in Middle English, an example of Jespersen's Cycle. Wallage (2008) characterises the syntax of the stages of Jespersen's Cycle as follows:

Stage 1: sentential negation is morphologically marked by a prefix *ne* on the finite verb, as in (37). The word *ne* is associated with a semantically interpretable negative feature [*i*Neg]

(37) we **ne**   mugen þat don
     We NEG can   that do
     'We cannot do that'
     (thirteenth century; TRINIT,108.1370)

Stage 2: sentential negation is morphologically marked by two elements: a syntactic head *ne* with a semantically uninterpretable feature [*u*Neg], and a phrasal (specifier) element *not* which has a semantically interpretable feature [*i*Neg]. This feature checks the [*u*Neg] feature of the negative head. An example is given in (38).

(38) I **ne**   may **nat** denye it
     I NEG may not   deny   it
     'I may not deny it'
     (fourteenth century; BOETH,435.C1.262)

Stage 3: sentential negation is morphologically marked on the phrasal element *not*, which has a semantically interpretable [*i*Neg], as in example (39).

(39) I know **nat** the cause
     'I do not know the cause'
     (fifteenth century; MALORY,627.3549)

The element which marks the scope of negation at LF changes in the transition from stage 1 to stage 2. At stage 1, *ne* has the [*i*Neg] feature necessary to mark sentential scope. At stage 2 it does not, but has a [*u*Neg] feature. At stages 2 and 3, *not* has an [*i*Neg] feature and is the marker of sentential scope negation at LF.

For negative inversion to occur, sentential scope must be marked on the clause-initial negative item, i.e. the clause-initial negative item must have an [*i*Neg] feature. Since a negative clause can contain only one [*i*Neg] feature, Old English *ne* at stage 1 and Middle English *not* at stages 2 and 3, which both have an [*i*Neg] feature, cannot appear in clauses with negative inversion unless the negative marker is itself in clause-initial position. However, at stage 2 of Jespersen's Cycle, it is possible for *ne* to appear in clauses where negative inversion follows some other clause-initial negative item because stage 2 *ne* has an uninterpretable [*u*Neg] feature. Hence examples like (40) are found.

(40) and nothing ne   shal they fynden in hir   hands of all hir   tresor
      and nothing NEG shall they find   in their hands of all their treasure
      'and they shall find none of their treasure in their hands'
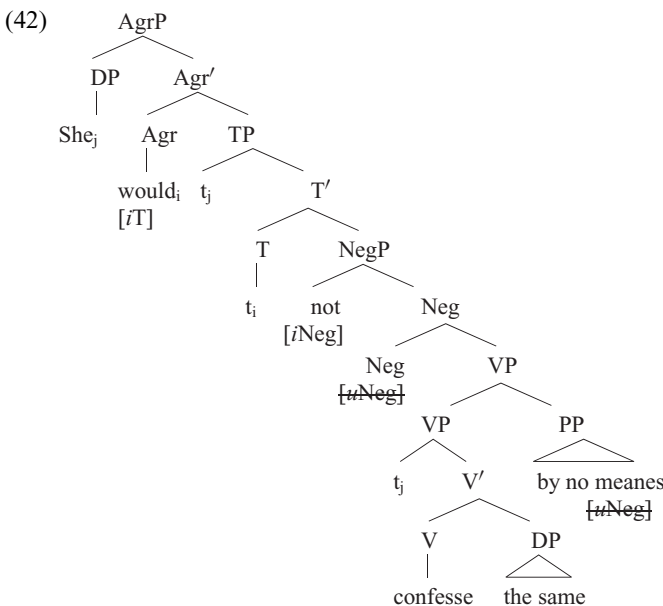   (fourteenth century; CTPARS,292.C1.156)

Next, I show how clauses with initial negative items are syntactically derived at each
stage of Jespersen's Cycle, starting with stage 3 and working back through stages 2
and 1.

6.2 Clause-initial negatives in negative concord with Middle English and Early Modern English *not*

When the negative marker *not* has an [*i*Neg] feature, all other negative items in the
clause are concordant elements bearing [*u*Neg] features which agree with *not*. In such
clauses, like (41), any clause-initial negative is in negative concord with *not*, and not
itself a marker of sentential scope negation.

(41) but by no meanes   she would not confesse the same
      but by no means   she would not confess   he same
      'but by no means would she confess the same'
      (sixteenth century; ORIGIN2,287.030.461, PCEEC)

At the point before C^0 is merged, the structure is as in (42). I assume V-to-Agr
movement for early English following Haeberli (2002a).[10] The negative marker *not*
[*i*Neg] is merged in spec,NegP and checks [*u*Neg] features on Neg^0 and on *by no
meanes* by multiple agreement. After being checked against the [*i*Neg] feature on *not*,
the [*u*Neg] features on Neg^0 and on *by no meanes* are deleted.

(42)
```
                        AgrP
                       /    \
                    DP       Agr′
                    |       /    \
                  She_j   Agr     TP
                          |      /   \
                        would_i t_j    T′
                        [iT]         /    \
                                    T      NegP
                                    |     /    \
                                    t_i  not    Neg
                                        [iNeg] /    \
                                             Neg      VP
                                            [uNeg]   /   \
                                                   VP     PP
                                                  /  \    /  \
                                                t_j   V′  by no meanes
                                                     /  \     [uNeg]
                                                    V    DP
                                                    |    /\
                                                confesse the same
```

---

[10] The [*i*T] feature on the verb or auxiliary marks it as finite or tensed.

(43) shows the complete CP for the sentence in (41). *By no meanes* has moved to spec,CP, but this movement is independent of the need to check [uNeg] features on the phrase *by no meanes* or on C^0. *By no meanes* does not have the semantically interpretable [iNeg] feature associated with negative force, so does not check a [uNeg] feature on C^0. Since it lacks semantically interpretable negative features, *by no meanes* also does not trigger negative inversion under the Neg-criterion. *By no meanes* may be a topic or focus in spec,CP.

(43)

```
                          CP
                     ╱         ╲
                   PP            C′
                  ╱╲          ╱      ╲
          By no meanes_k    C         AgrP
             [uNeg]                 ╱      ╲
                                  DP        Agr′
                                  │       ╱      ╲
                                 She_j   Agr       TP
                                        │        ╱    ╲
                                      would_i   t_j    T′
                                       [iT]         ╱     ╲
                                                   T       NegP
                                                   t_i   ╱      ╲
                                                       not       Neg′
                                                      [iNeg]   ╱      ╲
                                                             Neg        VP
                                                            [uNeg]    ╱    ╲
                                                                    VP      PP
                                                                   ╱  ╲     t_k
                                                                  t_j   V′
                                                                      ╱    ╲
                                                                     V      DP
                                                                     │     ╱╲
                                                                 confesse  the same
```
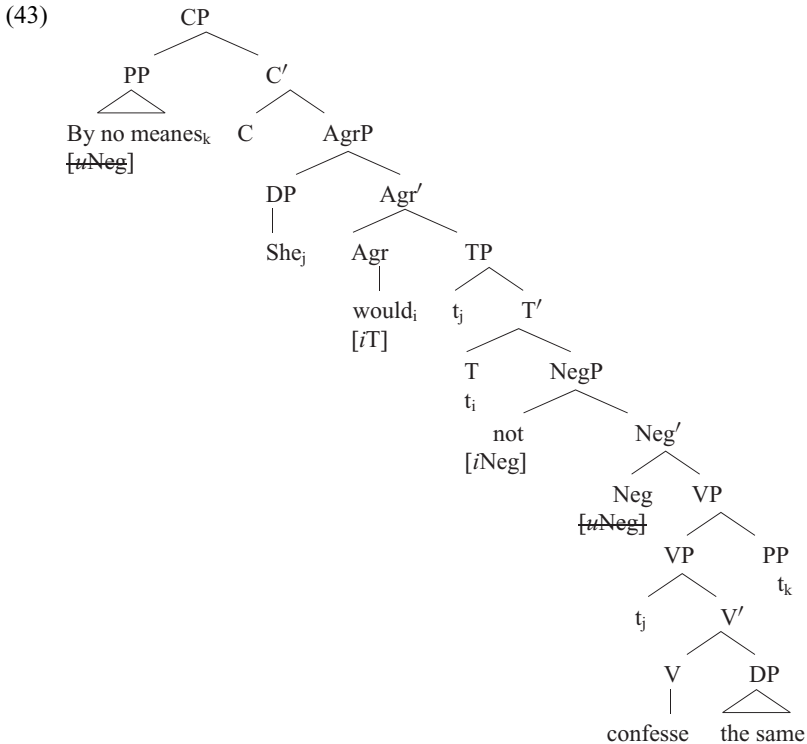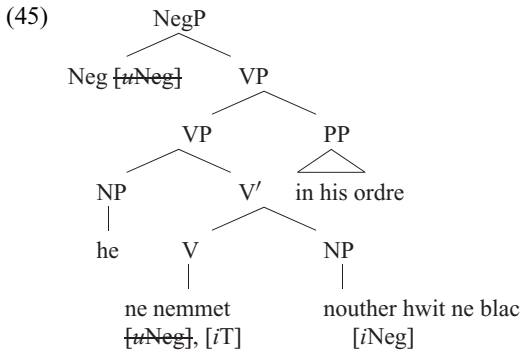
6.3   Clause-initial negatives in negative concord with Middle English *ne*

At stage 2 of Jespersen's Cycle, the negative marker *ne* has a semantically uninterpretable [uNeg] feature, so it can co-occur with a clause-initial negative which has an [iNeg] feature. As a result, *ne* at stage 2 is compatible with negative inversion. The derivation for an example like (21b), repeated here as (44), is shown in three stages, (45)–(47).
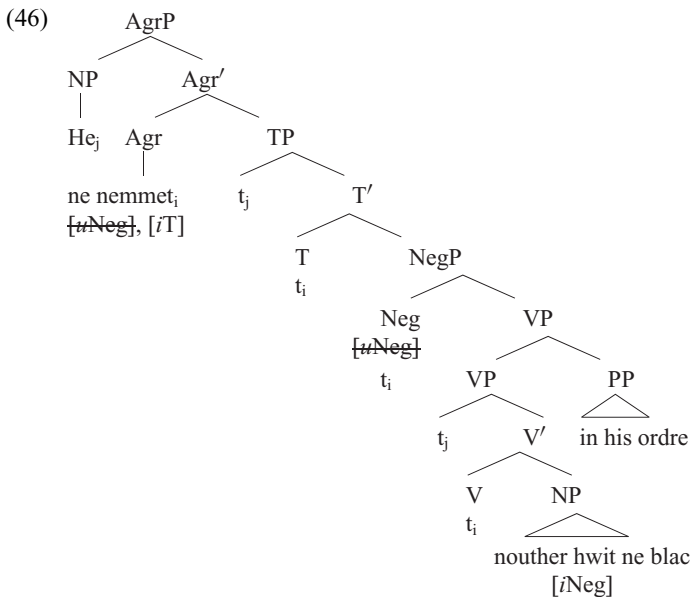
(44) Nouther hwit   ne   blac   ne   nemmet he in his ordre
     Neither white nor black NEG names   he in his order
     'He does not name in his order either white or black'
     (thirteenth century; ANCRIW,I.48.84)

(45) shows the first stage in the derivation of (44). *Ne* is a clitic prefixed to the finite verb in V. The [uNeg] feature on the negative head Neg^0 probes for a matching

interpretable feature and is checked by agreement with the [iNeg] on *nouther hwit ne blac*. Under Multiple Agree, this operation also checks the [uNeg] feature on the finite verb *ne nemmet*.

(45)

```
                    NegP
                   /    \
          Neg [uNeg]      VP
                        /    \
                      VP       PP
                     /  \      /\
                   NP    V'   in his ordre
                   |    /  \
                   he  V     NP
                       |     |
                   ne nemmet  nouther hwit ne blac
                   [uNeg], [iT]    [iNeg]
```

At the point before C^0 is merged, the structure looks like (46), with the subject in spec,AgrP and movement of the finite verb to Agr^0.

(46)

```
            AgrP
           /    \
         NP      Agr'
         |      /    \
        He_j   Agr     TP
               |      /   \
          ne nemmet_i t_j   T'
          [uNeg], [iT]      /  \
                           T    NegP
                           t_i  /    \
                              Neg      VP
                            [uNeg]    /   \
                              t_i    VP     PP
                                    /  \    /\
                                  t_j   V'  in his ordre
                                       /  \
                                      V    NP
                                      t_i  /\
                                    nouther hwit ne blac
                                         [iNeg]
```

The complete CP is given in (47). C^0 has a [uNeg] feature checked by agreement with the [iNeg] feature on the NP *nouther hwit ne blac*, which moves to spec,CP. Since *nouther hwit ne blac* has an [iNeg] feature, it is a negative operator. Where there is an operator in spec,CP the finite verb moves to C^0. So I postulate that when C^0 has a [uNeg] feature, it also has a [uT] feature which ensures overt movement takes place. Alternatively, we could adopt a modified Neg-criterion analysis in which only negative

items with [*i*Neg] features count as negative operators, but see note 9 for some problems with this approach.
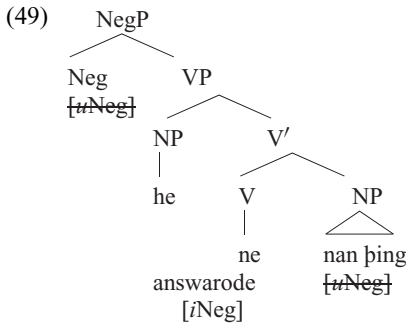
(47)
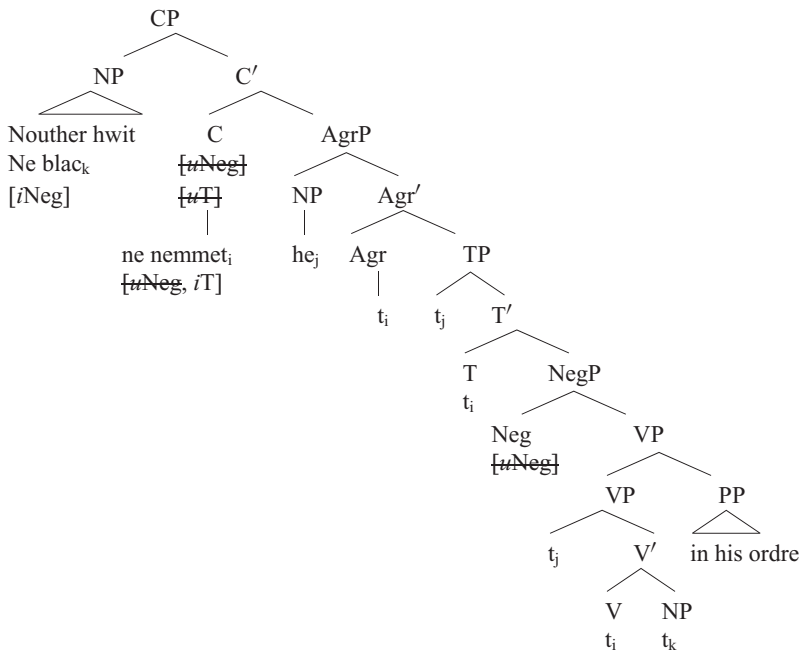
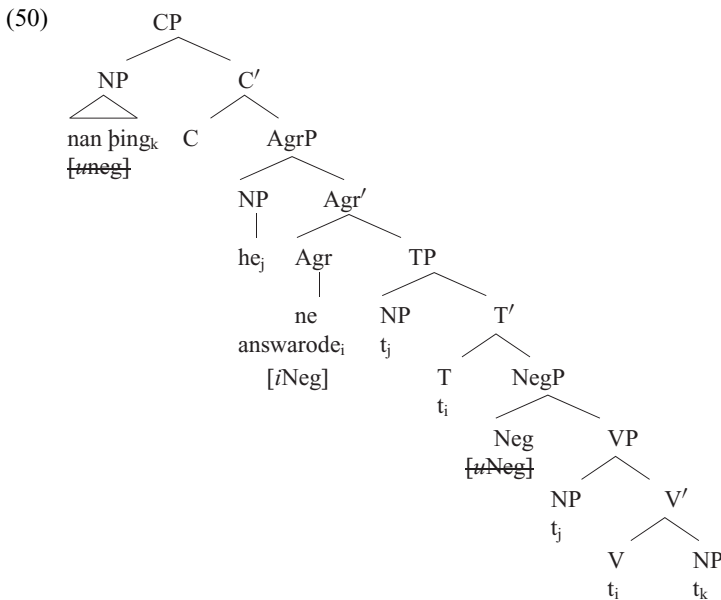### 6.4　*Clause-initial negatives in negative concord with Old English* ne

At stage 1 of Jespersen's Cycle, i.e. Old English, *ne* has an interpretable [*i*Neg] feature, and so marks sentential scope negation. Any negative items which co-occur with it will be concordant items, without negative force. Hence at stage 1, there will be no negative inversion when the clause-initial negative is in negative concord with *ne*. (24a) gives an example of this type, repeated here as (48).

(48) nan þing　he　ne　　answarode
　　　no　thing　he　NEG　answered
　　　'he did not give any answer'
　　　(eleventh century; wsgosp,Mt_[WSCp]:27.12.2014)

　　(49) shows the structure at the point where the negative head Neg^0 is merged. Negative *ne* is prefixed on the finite verb in V^0 and has an interpretable [*i*Neg] feature. *Nan þing*, the noun phrase in object position, has a [*u*Neg] feature. The [*u*Neg] feature on Neg^0 agrees with all matching features within the derivation under Multiple Agree. As a result, the [*u*Neg] features on Neg^0 and on *nan þing* are checked by multiple agreement with the [*i*Neg] feature on the verb *ne answarode*. This means that the [*u*Neg] feature on *nan þing* is deleted at this point in the derivation.

(49)

```
              NegP
             /    \
          Neg      VP
        [uNeg]    /  \
                NP    V′
                |    /  \
                he  V    NP
                    |    /\
                   ne  nan þing
               answarode [uNeg]
                 [iNeg]
```

The complete CP looks like (50) when spelled out. Since *nan þing* does not have an [*i*Neg] feature, it cannot check [*u*Neg] features on C^0. Instead, its movement to spec,CP is independent of any need to check neg-features.

(50)

```
                    CP
                   /  \
                 NP    C′
                / \   /  \
          nan þing_k C   AgrP
            [uneg]       /  \
                       NP    Agr′
                       |    /   \
                      he_j Agr    TP
                           |     /  \
                          ne    NP   T′
                      answarode_i t_j  / \
                         [iNeg]       T   NegP
                                     t_i  /  \
                                        Neg   VP
                                      [uNeg]  / \
                                            NP   V′
                                            t_j  / \
                                                V   NP
                                                t_i  t_k
```

6.5 Summary

The co-occurrence of negative inversion and negative concord is a consequence of the morphosyntactic features of the negative marker in the negative concord construction. Variation in negative inversion can be explained using the same syntactic mechanism that Wallage (2008) argues operates within Jespersen's Cycle. Change in the interpretability of the negative feature on *ne* is implicated in the grammaticalisation of *not*, and in the development of negative arguments and adverbials as negative operators with the feature [*i*Neg], which leads to new patterns of negative inversion. For negative inversion to take place, the clause-initial negative item must have an [*i*Neg] feature.

Only one [*i*Neg] feature is allowed per negative clause, so clause-initial negatives with [*i*Neg] are incompatible with negative markers which also have [*i*Neg] features, i.e. incompatible with *ne* at stage 1of Jespersen's Cycle and *not* at stages 2 and 3. At stage 2 of Jespersen's Cycle, however, *ne* has a [*u*Neg] feature so is compatible with negative inversion.

7   Implications

7.1   *The semantic representation of negative concord*

The account sketched above has implications for the question of how negative concord is to be represented. Zeijlstra (2004: 243ff.) adopts an operator-variable binding approach to the semantics of negative concord. His account requires that the negative operator [*i*Neg] c-commands and therefore binds all the concordant [*u*Neg] items. Zeijlstra (2004: 243ff.) argues that this binding requirement operates at S-structure. However, this analysis predicts that examples like (41) with Early Modern English *not*, repeated here as (51), should not occur.

(51) but by **no meanes** she would **not** confesse the same
     'but by no means would she confess the same'
     (sixteenth century; ORIGIN2,287.030.461, PCEEC)

   It is generally accepted that Early Modern English *not* is fully grammaticalised as a marker of negative force (with an [*i*Neg] feature), yet the concordant negative *by no meanes* in (51) precedes *not*. Also in cases of negative concord involving a negative subject, like (52), the concordant negative subject precedes the negative marker *not*.

(52) but **no Cristen man** ys **not** suffered for to come ny it
     'but no Christian man is permitted to come near it'
     (sixteenth century; TORKINGT-E1-H,30.117)

If we are to maintain the distinction between negative concord with *ne* and negative concord with *not* proposed on the basis of changes to negative inversion, then an account of negative concord as operator-variable binding at S-structure cannot be maintained. Instead we have to say either that the negative operator *not* raises to the left-periphery at LF, from where it c-commands all concordant negative items, or that the negative concord relation is based on syntactic licensing via morphosyntactic feature checking rather than a particular configuration at LF.

7.2   *The loss of negative concord in the fourteenth and fifteenth centuries*

The analysis I propose provides a plausible link between Jespersen's Cycle and the loss of certain kinds of negative concord in the fourteenth and fifteenth centuries. Frisch (1997: 33) claims that clauses with negative arguments – subjects or objects involving the negative quantifier *no* or negative pronouns like *nothing* – or negative adverbials like

never, *by no means*, *in no way* should be excluded from accounts of the Middle English Jespersen Cycle because the distribution of *ne*, *ne . . . not* and *not* in these clauses differs from their distribution elsewhere. However, the analysis proposed in section 6 points to an explanation for the anomalous behaviour of these cases. Examination of all the negative arguments in the PPCME2 corpus shows that negative arguments usually appear in negative concord with the negative marker *ne* until the fourteenth century. This is shown by the fact that sentences like (53a) are frequent. However, Jack (1978) finds that the negative markers *ne . . . not* or *not* rarely appear in negative concord with a negative argument or a negative adverbial even in the fourteenth and fifteenth centuries, when *not* is firmly established as the default negative marker elsewhere. This means that the patterns in (53b) and (53c) are rare. Instead, negative arguments tend not to enter into negative concord with either the negative markers *ne* or *not* in the fourteenth or fifteenth centuries, but are the only negative word in their clause, as shown in (53d).

(53) (a) he **ne**　　may **noþing** wel　conne
　　　　 he　NEG　may nothing　well　know
　　　　 'He may not know anything well'
　　　　 (fourteenth century; AYENBI,117.2247)

　　　(b) Thou **ne**　　shalt **nat** eek　make **no lesynges**　　in thy　　confessioun . . .
　　　　 You　NEG　shall not also　make no falsehoods　in your　confession . . .
　　　　 'You shall also not tell any lies in your confession . . . '
　　　　 (fourteenth century; CMCTPARS,325.C1a.1581)

　　　(c) and he wolde　**not**　make **noo　confession** unto　**no pryste** . . .
　　　　 and he would　not　make no　confession　to　　no priest . . .
　　　　 'and he would not make any confession to any priest . . . '
　　　　 (fifteenth century; GREGOR,233.2474)

　　　(d) They coude　**no council**　gyve
　　　　 They could　no advice　　give
　　　　 'They could give no advice'
　　　　 (fifteenth century; CMMALORY,14.421)

Table 6 presents figures for all clauses that contain a negative argument, distinguished according to whether the clause, in addition, contains the negative marker *ne*, *ne . . . not*, *not* or no negative marker at all. For comparison, it also gives the frequencies of clauses with *ne*, *ne . . . not* and *not* but without negative arguments or negative adverbials – that is, clauses in which the only negative words are either *ne*, *not* or both *ne* and *not*. In these clauses, *ne . . . not* or *not* are the most frequent ways of marking negation even as early as the thirteenth and fourteenth centuries. (54) is an early example.

(54) for hij　**ne**　vnder-stode **nout** þe　werkes　of our Lord
　　 For　they NEG　understood　not　the　works　of our Lord
　　 'For they did not understand the works of our Lord'
　　 (fourteenth century; EARLPS,31.1280)

Table 6 shows that as the frequency of negative concord with *ne* declines, there is no corresponding increase in the frequency of negative concord with *not*. Instead, the loss

Table 6. *The frequency of* ne, ne . . . not *and* not *in clauses with and without negative arguments in Middle English (1150–1500)*

| Period | Clauses with a negative argument | | | | | Clauses without a negative argument/adverbial | | | |
| | Negative marker | | | No negative marker | Total | ne | ne . . . not | not | Total |
	ne	ne . . . not	not						
1150–1250	91.2% (n = 394)	– (n = 0)	– (n = 0)	8.8% (n = 38)	432	60.6% (n = 436)	38.5% (n = 277)	1.0% (n = 7)	720
1250–1350	90.0% (n = 127)	0.7% (n = 1)	– (n = 0)	9.3% (n = 13)	141	22.9% (n = 166)	67.7% (n = 490)	9.4% (n = 68)	724
1350–1420	8.7% (n = 77)	0.7% (n = 6)	1.6% (n = 14)	89.1% (n = 793)	890	1.9% (n = 43)	10.5% (n = 236)	87.5% (n = 1959)	2238
1420–1500	0.3% (n = 2)	– (n = 0)	2.0% (n = 17)	97.8% 849	868	0.7% (n = 14)	1.0% (n = 18)	98.3% (n = 1842)	1874

of *ne* leads to an overall decline in negative concord involving a negative marker (*ne*, *ne . . . not* or *not*). This means that if a clause has a negative argument, it is increasingly often the sole negative item in the clause, as in (53d).

In section 6, I argued that there could be negative inversion in Middle English following a clause-initial negative argument because negative arguments at that point were markers of sentential scope negation, bearing [*i*Neg] features. I proposed that the incompatibility of *not* and negative inversion follows because there cannot be two [*i*Neg] features in a negative clause. Put differently, *not* is not required to introduce an [*i*Neg] feature to the clause when [*i*Neg] has already been introduced by the negative argument. In fact, since a negative clause can contain only one [*i*Neg] feature, it follows that *not* is not allowed in these cases. Extending this analysis to negative arguments in non-clause-initial positions derives the more general incompatibility between *not* and negative arguments seen in table 6. In contrast, *ne* is able to appear in negative concord with negative arguments in Middle English because it has an uninterpretable [*u*Neg] feature.

There is one further infrequent pattern to note. Negative arguments and adverbials sometimes enter into negative concord with each other in clauses without the negative markers *ne* or *not* (55) (n = 6 in the PPCME2).

(55) but he was so hard, þat **no begger** might gete **no good** of hym by **no**
      but he was so hard that no beggar might get no good of him in no

      maner   wyse
      manner   way
      'But he was so hard-hearted that no beggar might get any good of him in
      any kind of way'
      (fifteenth century; MIRK,104.2825)

A possible analysis of such clauses is that one negative argument has an [*i*Neg] feature, and the others have [*u*Neg] features. The negative argument with the [*i*Neg] feature licenses the negative arguments which have [*u*Neg] features by agreement. This would mean that the loss of negative concord from Standard English involves the loss of negative arguments or negative adverbials with [*u*Neg] features. Once every negative item has an [*i*Neg] feature, there can only be one negative word in each negative clause.

7.3   Inversion facts as evidence for dating the grammaticalisation of not

The analysis of negative inversion presented here makes predictions about the grammaticalisation of *not* in Middle English. Once *not* is grammaticalised as a marker of negative force with an [*i*Neg] feature, I predict that when it appears in negative concord with a clause-initial negative item there will be no negative inversion. Indeed, in later Middle English and Early Modern English (1350–1700), *not* rarely appears in clauses with negative inversion. Within this extended period, only 9.7 per cent (n = 3/31) of clauses with negative inversion also have *not*. One of these three examples is (19), repeated here as (56).

(56) no more would not I if I was your wife
    'no more would I if I were your wife'
    (seventeenth century; PENNY-E3-H,267.501)

However, in Early Middle English (1150–1250), 76.5 per cent (n = 13/17) of clauses
with negative inversion have *not*. Two examples can be seen in (57).

(57) (a) Ne   understandeð hie **naht** þat alswa michel senne hit is to
         NEG   understand   they not that also much   sin   it is to
         breken fasten . . .
         break   fast . . .
         'They do not understand that it is also much sin to break the fast . . . '
         (thirteenth century; VICES1,137.1701)
    (b) Nis   hit **naht** riht þat we hie   forlaten
        NEG-is   it not right that we them abandon
        'It is not right that we abandon them'
        (thirteenth century; VICES1,141.1753)

Negative inversion following *ne*, as in these examples, requires that *ne* has an [*i*Neg]
feature, so in order to co-occur with initial *ne* in these clauses, *not* must have a [*u*Neg]
feature.[11] These differences between the ability of *not* to co-occur with inversion at
different periods allow us to date the grammaticalisation of *not* as an LF-interpretable
marker of negation with an [*i*Neg] feature to the thirteenth century. After this date,
examples like (57) are no longer found. This corresponds with the date Haeberli &
Ingham (2007) propose on the basis of positional facts.

In clauses which have non-initial *ne* and *not*, it is possible to analyse the co-
occurrence of *ne* and *not* in two ways, with sentential scope negation being marked
either by *ne*, as in (60a), or by *not*, as in (60b). However, only the first option (60a) is
available in clauses which have initial *ne* and negative inversion, since *ne* must have an
[*i*Neg] feature in order to move to C^0. Hence, once *not* begins to grammaticalise as a
negative marker, its frequency should be lower in clauses with initial *ne*.

(60) (a) ne [*i*Neg] . . . .*not* [*u*Neg] (older pattern, *not* is in negative concord with *ne*)
    (b) ne [*u*Neg] . . . *not* [*i*Neg] (newer pattern, *not* is a negative marker; *ne* is in negative
        concord with *not*)

Early Middle English data from the period 1150–1250 bear out this prediction: *not*
is more common in clauses with non-initial *ne* (91.3 per cent, n = 21/23) than in
clauses with initial *ne* (76.5 per cent, n = 13/17). The almost categorical use of *not*
in clauses where *ne* appears non-initially indicates its incipient grammaticalisation in
these clauses.

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[11] It is noteworthy that many examples of the type in (57) occur in translations of Latin texts or passages. However,
    since Latin does not have multiple negation, such examples cannot be due to direct Latin influence.

8 Conclusion

In this article, I have argued that changing patterns of subject–verb inversion following clause-initial negatives are linked to changes in the scope associated with negative items.[12] As I have shown, the history of negative inversion, changes to negative concord and the grammaticalisation of new sentential negative markers receive a unified explanation, which follows from changes in the scope properties of negative items during the Middle English period. The availability of negative inversion in negative concord constructions follows a cycle which is linked to changes in the way sentential negation is marked at the various stages of Jespersen's Cycle. The data presented here provide further support for the analysis of Jespersen's Cycle in Wallage (2008), which distinguished *ne* [*i*Neg] at stage 1 of Jespersen's Cycle from *ne* [*u*Neg] at stage 2 of Jespersen's Cycle in terms of LF-interpretability of negative features.

The replacement of *ne* [*i*Neg] by *ne* [*u*Neg] in the twelfth to thirteenth century co-occurs with a reanalysis of clause-initial negative items as negative operators with [*i*Neg] features of their own. The two structural analyses of clause-initial negative items given in (61) were only distinguished by the non-occurrence of negative inversion in (61a) and its occurrence in (61b).

(61) (a) Negative argument [*u*Neg] ... *ne* V [*i*Neg]
      (no negative inversion)
  (b) Negative argument [*i*Neg] ... *ne* V [*u*Neg]
      (negative inversion)

Once language learners learned that *ne* had [*u*Neg] features, clauses with initial negative items would have the structure (61b) instead of (61a). It is this change that gave rise to new patterns of negative inversion.

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[12] Although I argue that changes in scope marking for negation play a crucial role in enabling new patterns of negative inversion, negative inversion is not categorical in Middle English or Early Modern English, even in clauses which have only one (clause-initial) negative item. For Present-day English, Haegeman (2001) argues that some clause-initial negatives, especially adverbials, do not function as operators but appear initially as topics without negative inversion. Similar examples with initial negative adverbials and no inversion appear in Middle English and Early Modern English.

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