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Some Notes on Infinitives and Negation in English

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1. Introduction

In this paper I examine the behavior of the English infinitival particle to. Section 2 reviews data from Italian and European Portuguese showing infinitives raising to Comp position in those languages. In section 3 I turn to English, using the placement of adverbs and floated quantifiers to argue that to always raises to Comp position in infinitival CPs in which the Infl position is unoverned. In section 4 I explore two possible motivations for this movement, and I conclude that it is due to a requirement that to receive Case. Finally, in section 5 I examine negated infinitival clauses which on the surface appear problematic for my analysis, and suggest that the data is explained if sentential not is analyzed as a bound morpheme.

2. Background

The movement of an infinitival element to Comp position is clearly attested in Italian and European Portuguese. The presence of a lexical subject in Spec,IP makes it easy to see this movement; rather than appearing in Infl and therefore following the subject, the verb raises to Comp and precedes the subject:

(1) Italian (cf. Rizzi (1982))

a. Mario afferma [CP essere] [IP lui t in grado di
Mario asserts to-be he able
affrontare la situazione.
to-face the situation

'Mario asserts he is able to face the situation.'

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H. Grabois, D. Parkinson, and D. Yeager (eds.),
© 1994 by Michael Bernstein
b. *Mario afferma [lui essere in grado di affrontare
Mario asserts he to-be able to-face
la situazione].
the situation

(2) European Portuguese (cf. Raposo (1987))

a. Ela pensa [CP terem i [IP eles t i vindo]].
She thinks to-have-3p they come
'She thinks they have come.'

b. *Ela pensa [eles terem vindo].
She thinks they to-have-3p come

In the Italian sentence in (1a), the infinitive essere precedes the subject lui. The tree in (3a) shows the movement of the infinitive from Infl position to Comp position. Once the infinitive is in Comp, it comes before the subject. The same movement happens in the Portuguese sentence in (2a). The infinitive terem, which is marked for agreement but not for tense, has raised to Comp position where it precedes the subject eles. The partial tree showing this movement is in (3b).
The proposed motivation for this movement has varied. (1b) and (2b) show that the movement is obligatory in these sentences; the infinitive cannot remain in Infl and follow the subject. Rizzi (1982) claims that the infinitival auxiliary moves to Comp in Italian to license the nominative subject. This movement is not necessary in his analysis if there is no nominative subject. Raposo (1987) argues that the inflected infinitival in Portuguese raises to Comp because it needs to be Case-marked, and it cannot be Case-marked while in Infl in a CP. In other contexts when the order is subject-verb, Raposo says that the infinitival clause is an IP with no CP above it, and the infinitive can then be Case-marked in Infl because there is no CP to block government of the Infl position. The selection of either a CP or an IP infinitival clause is independently determined by the matrix verb through categorial selection. The verb pensa in (2) necessarily selects for a CP, not an IP, so the embedded infinitive must raise to Comp and precede the subject. In (4), the verb vi selects for an IP, not a CP, so the embedded infinitive stays in Infl position and follows the subject.

\[\text{(4)}\]
\[\text{a.} \quad \text{Eu vi [os meninos terem vindo].}\]
\[\quad \text{I saw the children to-have-3p come}
\[\quad \quad \text{'I saw the children come.'}\]
\[\text{b.} \quad \text{*Eu vi [terem os meninos vindo].}\]
\[\quad \text{I saw to-have-3p the children come.}\]

In Bernstein (1992), I extend Raposo’s analysis to Italian and Spanish, and argue that Romance infinitives in general need to be Case-marked and that this movement of the infinitive to Comp happens in any infinitival CP that has an empty Comp in order to satisfy that requirement. This movement in Romance languages of infinitives to the Comp position when Comp is empty leads to the obvious question of whether English behaves similarly; the remainder of this paper proposes that it does.

3. Infl-to-Comp in English

In contrast to the above Romance languages, the infinitive feature [-Tense] is not realized on the verb in English. It is instead realized as an independent particle to. That to is not attached to the verb is demonstrated by sentences like (5a-b) in which an adverb is adjoined between the position of to and the position of the verb:  

\[\text{For most speakers of American English, splitting the infinitive in this way is not a problem. While there may be dialects in which to is bound to the verb and splitting an infinitive is therefore impossible, this does not represent the common spoken dialect.}\]
(5)  
   a. Kim wanted to quickly leave the building.
   b. Jill didn’t expect Bob to frantically check his watch every five minutes.

Taking to to be a free morpheme in Infl, the question is then whether it ever raises to Comp. The relevant clauses would be infinitival CPs with an empty Comp which to could raise into. That type of clause in English always has a non-overt PRO subject, so we cannot look at subject inversion. Fortunately, there are other clues as to how to behaves. Whitman (1991) and Whitman and Bernstein (in prep) discuss the relative position of adverbs, floated quantifiers, and negation with respect to to, and argue that these data can be used to show that to sometimes raises to Comp.\footnote{The data presented in this paper represents at least a dialect of English spoken by a number of naive (non-linguist) native English speakers from different areas of the United States. The data on floated quantifier placement matches the data presented by Baltin (1992), and the data on negation and on adverb placement matches the data given in an anonymous review of another paper. All of my informants agreed in relative judgments. In other words, some sentences marked as grammatical may have been judged as awkward, but they are judged substantially better than counterpart sentences marked as ungrammatical.} I will discuss the data on adverbs and quantifiers in this section, leaving negation for later.

3.1. Adverb placement evidence

To explore adverb placement as a diagnostic for movement, we must first establish what the possible positions are for specific adverbs. I will use frequently and usually; which seem to pattern together. In (6-8) the tensed embedded clause that John does go shopping has that in Comp, John in Spec,IP, does in Infl, and go shopping in the VP. (6a) shows that an adverb can occur as an I' adjunct, appearing in this case between John in Spec,IP and does in Infl. The corresponding structure is shown in (6b).
(6)  
  a. I believe that John \([\_\text{frequently/usually does go shopping}]\).

b. 

\[
\text{CP} \\
\text{C'} \\
\text{Comp} \quad \text{IP} \\
\quad \text{that} \quad \text{NP} \quad \text{I'} \\
\text{John} \quad \text{AP} \quad \text{I'} \\
\quad \text{adv} \quad \text{Infl} \quad \text{VP} \\
\quad \text{does} \quad \text{go shopping}
\]

(7a) shows that an adverb can occur as a VP adjunct, surfacing here between \textit{does} in Infl and \textit{go shopping} in VP. The structure for (7a) is given in (7b).\(^3\)

\(^3\) The adverb in (7a) could also be a \textit{V'} adjunct, paralleling the \textit{I'} adjunction in (6a). Conversely, it could be that an expanded IP would allow the \textit{I'} adjunction position to be reanalyzed as phrasal adjunction to one of the functional categories dominating the verb. While it may be aesthetically desirable to restrict the possible levels of adjunction to eliminate either phrasal adjunction or single-bar-level adjunction, it does not appear to be possible under most expansions of IP. Pollock (1989) argues that Tense Phrase (TP) is the highest functional projection of the verb in English, while Chomsky (1992) argues that an Agreement Phrase (AgrP) is the highest functional projection of the verb. Under both of those proposals, the subject appears in the specifier of the top functional category and an auxiliary such as \textit{does} appears in the head position of the top functional category. (6a), repeated as (i) here, shows that adverbs can appear between the subject in Spec,TP/AgrP and the auxiliary in \textit{T}/Agr, presumably as an \textit{T'}/Agr' adjunct. (ii) shows that adverbs can also appear between Comp and TP/AgrP, presumably as a TP/AgrP adjunct.

(i) \quad \text{I believe that John frequently does go shopping.}

(ii) \quad \text{I believe that frequently John does go shopping.}

I will assume for this paper that both XP and \textit{X'} adjunction are possible. The exact expansion of IP and whether (7a) represents VP or \textit{V'} adjunction are not important for the arguments in this paper. I use (7a) to show that \textit{frequently} can occur somewhere below Infl, and I will argue below that my
(7)  a. I believe that John does [\(\text{VP \ frequently/usually \ go \ shopping} \)].

\[
\begin{align*}
\text{CP} \\
\text{C'} \\
\text{Comp} \\
\text{that} \\
\text{NP} \\
\text{John} \\
\text{Infl} \\
\text{VP} \\
\text{AP} \\
\text{adv} \\
\text{go \ shopping}
\end{align*}
\]

In (8) we see that putting the adverb above the Comp position is not possible. The sentence in (8) cannot take the meaning where \textit{frequently} modifies the embedded clause. When the adverb modifies the matrix clause the sentence is fine, but the adverb is then not located within the embedded CP.

(8)  *I believe [\(\text{CP \ frequently/usually \ that \ John \ does \ go \ shopping} \)].

There are other possible positions for these adverbs within the embedded clause, but those positions are not relevant for this paper.

Turning from tensed clauses to infinitival clauses, we get an interesting contrast between clauses with a filled Comp and those with an empty Comp:

(9)  a. It would be a problem for Kim (frequently/usually) to go shopping.
    b. It would be a problem for Kim to (frequently/usually) go shopping.
    c. It would be a problem (*frequently/*usually) to go shopping.
    d. It would be a problem to (frequently/usually) go shopping.

In (9a-b) there is a lexical subject and a preposition \textit{for} in Comp. We see in (9a) that the I' adjunct position is available for the adverbs, and we see in (9b) that the VP adjunct position is available. This is consistent with the

analysis holds for any expansion of IP which treats all English infinitival clauses consistently.
tensed clauses in (6-7). In (9c), however, the adverbs cannot occur above to. The adverbs can still occur below to, as in (9d).

There are two differences between the clauses in (9a) and (9c). In (9c) the subject is the non-lexical PRO, and the Comp position is empty. There is no obvious reason for either of those facts to affect the grammaticality of adjoining an adverb to I'. We can, however, explain the paradigm in (9) if we assume that in (9c-d), to has raised to the empty Comp position. Then there is no available position for the adverb above to, and I' adjunction would put the adverb after to. The sentence in (9d) then has two possible structural representations, shown in (10a-b):

(10) a. CP
    C'
    Comp
    IP
    to_i
    NP
    PRO
    AP
    adv
    Infl
    t_i
    go shopping

(10) b. CP
    C'
    Comp
    IP
    to_i
    NP
    PRO
    Infl
    t_i
    AP
    adv
    go shopping
In (10a) to has raised to Comp position and the adverb is adjoined to I', while in (10b) to has raised to Comp and the adverb is adjoined to VP. The final order of all elements is the same for both (10a-b).

This account requires that infinitival adjuncts with PRO subjects always be CPs, which, on the assumption that adjuncts are governed, is required by the PRO Theorem in order to avoid having PRO appear in a governed position. The movement of to to the empty Comp position also must be obligatory. If to could remain in Infl in the clauses in (9c-d), we would incorrectly expect the order in (9c) to be possible.

In (11) we can see that infinitival complements follow the same pattern we just established for infinitival adjuncts:

(11)  
|   a. I want [IP Carl (frequently) to go shopping]. |
|   b. I want [IP Carl to (frequently) go shopping]. |
|   c. I want [CP (*frequently) to go shopping].    |
|   d. I want [CP to (frequently) go shopping].    |

The verb *want can take either an infinitival IP complement with a lexical subject, or an infinitival CP complement with a PRO subject and an empty Comp.4 In the IP complement, the adverb can appear either before to, as in (11a), or after to, as in (11b). In the CP complement, the adverb can only appear after to, so (11c) is ungrammatical while (11d) is grammatical. Again the explanation is that to has obligatorily moved in (11c-d) to the empty Comp position, and the possible structures for (11d) are parallel to the ones shown in (10).5

---

4 Kayne (1983) proposes that the infinitival complement to *want in (11a-b) is actually a CP with a null preposition in Comp which parallels *for. This would be compatible with my analysis; the null preposition would block to from raising to Comp in (11a-b), while to would raise to Comp in (11c-d).

5 Bowers (personal communication) points out that the paradigm in (9) and (11) may be clearer if more than one adverb is present in the embedded clause:

(i)  
|   a. I expect Carl (usually) to slowly go shopping. |
|   b. I expect Carl to (usually) slowly go shopping. |
|   c. I expect (*usually) to slowly go shopping.    |
|   d. I expect to (usually) slowly go shopping.    |

He suggests that the contrast may be stronger because adverb positions are more restricted when more than one adverb is present in a clause.
3.2. **Floated quantifier evidence**

Turning now to floated quantifiers, we find the same paradigm as in (9) and (11):

\[(12) \quad \begin{align*}
    &a. \, \text{We want [IP the noisy undergraduates (all) to go home].} \\
    &b. \, \text{We want [IP the noisy undergraduates to (all) go home].} \\
    &c. \, \text{The noisy undergraduates want [CP (*all) to go home].} \\
    &d. \, \text{The noisy undergraduates want [CP to (all) go home].}
\end{align*}\]

Regardless of the particular analysis of floated quantifiers, (12a) shows that there is a legitimate position for the floated quantifier above to in an IP complement. (12b) shows that the floated quantifier can also appear below to in an IP complement. When the complement is a CP, however, the quantifier cannot appear above to, so (12c) is ungrammatical, and (12d) is again structurally ambiguous. All could be in the position it has above Infl in (12a) or in the position it has below Infl in (12b), and both of those positions will be below to, which has again necessarily raised to Comp position.

Adjunct infinitival clauses with floated quantifiers also fit the paradigm established in (9) with adverbs:

\[(13) \quad \begin{align*}
    &a. \, \text{It wouldn’t be right for the hosts (both) to leave the party.} \\
    &b. \, \text{It wouldn’t be right for the hosts to (both) leave the party.} \\
    &c. \, \text{We may have work to do, but it wouldn’t be right (*both) to leave the party.} \\
    &d. \, \text{We may have work to do, but it wouldn’t be right to (both) leave the party.}
\end{align*}\]

3.3. **Persuade, passives, and raising verbs**

My analysis predicts that *persuade*, which takes an NP argument followed by an infinitival CP with a PRO subject, should disallow a quantifier or adverb between the NP and to. This is exactly what happens:

\[(14) \quad \begin{align*}
    &a. \, \text{We persuaded [NP the noisy undergraduates] [CP (*all) to go home].} \\
    &b. \, \text{We persuaded [NP the noisy undergraduates] [CP to (all) go home].} \\
    &c. \, \text{We persuaded Mary [CP (*frequently) to go shopping].} \\
    &d. \, \text{We persuaded Mary [CP to (frequently) go shopping].}
\end{align*}\]

In (14a,c) we can see that adverbs and floated quantifiers have no available
position above to in the infinitival complement, indicating that the infinitival clause is a CP in which to has raised to Comp.

The infinitival complements in passives and raising constructions are apparently also CPs:

\[(15)\]

a. We were expected \([_{\text{CP}} (*\text{all}) \text{ to help with the dishes}].\]
b. We were expected \([_{\text{CP}} \text{to (all) help with the dishes}].\]
c. We were expected \([_{\text{CP}} (*frequently) \text{ to check on the baby}].\]
d. We were expected \([_{\text{CP}} \text{to (frequently) check on the baby}].\]

\[(16)\]

a. The children began \([_{\text{CP}} (*\text{all}) \text{ to go home}].\]
b. The children began \([_{\text{CP}} \text{to (all) go home}].\]
c. The children began \([_{\text{CP}} (*frequently) \text{ to complain about their teacher}].\]
d. The children began \([_{\text{CP}} \text{to (frequently) complain about their teacher}].\]

Since the subject of the infinitival clause receives Case in the matrix subject position in passive and raising constructions, it does not need to receive Case in the embedded subject position. The embedded infinitival clause is a CP, and to raises to Comp. This is shown in (15a,c) and (16a,c), in which an adverb or a floated quantifier preceding to is ungrammatical.\(^6\)

3.4. Wanna-contraction

Obligatory raising of to to Comp provides a straightforward solution to the established problem of wanna-contraction. An example of wanna-contraction is given in (17):

\[(17)\]

a. I want \([_{\text{CP}} \text{PRO to go home}].\]
b. I wanna go home.

It has long been pointed out that a subject trace blocks wanna-contraction, as shown in (18):

\[(18)\]

a. Who, do you want \([_{\text{IP}} \text{t to go home}].\]
b. *Who do you wanna go home?

In (18), who has raised to the matrix Spec,CP, leaving behind a trace in the

---

\(^6\) Claiming that these complement clauses are CPs entails assuming different categorial selections of the complement for the active and passive forms of certain verbs. This also entails assuming that the subject trace can be governed by to, as long as to is not considered inert for government.
embedded Spec,IP between want and to. The standard explanation for why wanna-contraction cannot occur in (18) is that non-overt items like traces have at least enough reality to interfere with phonological processes like contraction. The problem which has generated so much debate on this issue is that in (17), where wanna-contraction can freely occur, the PRO subject intervenes between want and to. If traces block contraction, why doesn’t PRO? If to raises to Comp in (17), PRO does not actually intervene between want and to, and we would expect contraction to freely take place without any interference. We can thus avoid stipulative proposals such as PRO being different from other non-overt items or PRO occurring in a different structural position.7·8 The resulting structure for (17) is shown in (19), with to moving from Infl to Comp:

7 This solution to the problem was independently explored by Browning (1991). She points out that there should not be anything stopping to from raising to Comp, and that when it optionally does, wanna-contraction is no longer a problem. I argue that the movement of to to Comp in fact happens every time Comp is empty.

8 If subjects are generated in Spec,VP and they raise to Spec,IP for Case reasons, PRO could remain in Spec,VP. It would then not be in a position to block wanna contraction even if to remained in Infl. Baltin (1992) argues that leaving PRO VP-internal accounts for the floated quantifier data. If PRO does not raise above to and the floated quantifier does not raise above PRO, then the fact that a floated quantifier cannot occur above to follows naturally. There are two problems with adopting this account, however. The most serious problem is that it does not account for the adverb placement data. Additionally, it runs afoul of Diesing’s (1992) account of subject placement in individual-level predicates, where the subject is base-generated in Spec,IP.
(19) a. I want [\text{to}_{i} \text{PRO}_{t_{j}} \text{go home}].

b. 

```
V'
  \rightarrow
V
  \rightarrow
CP
  \rightarrow
C'
  \rightarrow
Comp
  \rightarrow
\text{IP}
  \rightarrow
\text{I'}
  \rightarrow
\text{NP}
  \rightarrow
\text{Infl}
  \rightarrow
\text{VP}
  \rightarrow
\text{to}_{i}
  \rightarrow
\text{PRO}
  \rightarrow
\text{t}_{j} \rightarrow \text{go home}
```

This movement cannot occur in (18) because there is no Comp position for \text{to} to raise into.

3.5. 

**An expanded IP approach**

So far I have treated IP as a single functional projection. The data above indicate that \text{to} raises; the question I will explore now is whether an expanded IP could provide a landing site for \text{to} within the IP. Since the paradigm in (9-15) shows that infinitival clauses with a lexical subject behave differently from infinitival clauses with a PRO subject, the first question is whether the expanded IP could be different for those two. If the functional projections above a verb are determined by the inflectional morphology of the verb, then there is no basis for positing different IP structures. The inflection in both clauses has the same morphological, syntactic, and semantic features, regardless of the identity of the subject. There is no reason for a lexical subject to need fewer or more verbal functional projections than a PRO subject; neither subject receives Case from the infinitival verb and both receive a \theta-role from the infinitival verb.\(^9\)

\(^9\) Aside from the lack of motivation for positing different verbal functional projections for infinitival clauses depending on the subject, such an analysis would require additional stipulations. If we posit an additional functional projection for a PRO subject, this would provide a landing site for \text{to} but would also provide possible adjunction sites for adverbs. We would have to stipulate that adverbs are not allowed to
Assuming that the internal structure of the IP is identical for all
infinitival clauses, there would have to be some difference in the behavior
of to caused by the different subjects. I will take the tree in (19) to be
representative of an expanded IP; the identity of “AgrP” and “TenseP” is
not relevant.

(20) AgrP (= top of IP)
    /   \
   Agr'   \
      /   \ 
     Agr   TenseP
          /   \
         Tense'  \
          /     \ 
         Tense  VP

If to is located in Agr, then there is no appropriate landing site for to above
Agr other than Comp in the clauses in which to raises. If to is instead
located in Tense, then Agr is available as a landing site. The problem is
that landing in Agr is not enough to raise to past adverbs adjoined to Agr'
or AgrP. Assuming that in tensed clauses the subject is in Spec,Agr and
the first auxiliary is in Agr, (21) shows that Agr' and AgrP are potential
adjunction levels for an adverb such as frequently:

(21)  a. I believe that John [Agr' frequently/usually does [TP go
shopping]].
  b. I believe that [AgrP frequently/usually John does [TP go
shopping]].

Raising to to Agr would then not rule out (9c), where the adverb cannot
occur before to:

adjoin to this projection, and I do not see how we could differentiate this
projection from the CP that is independently motivated. If we posit
instead an additional functional projection for a lexical subject, we would
have to assume that adverbs are not allowed to adjoin to X' or XP of the
highest projection for a PRO subject; otherwise adverbs would appear
before to. We would also have to assume that adverbs are allowed to
adjoin to X' of the new functional projection; otherwise adverbs would not
appear between the lexical subject and to. Neither of these solutions has
independent motivation, and both require a complication of the theory for
articulated IPs.
(9)  c.  It would be a problem (*frequently/*usually) to go shopping.

If we posit that in infinitival clauses adverbs cannot adjoin to Agr' or AgrP, we would still have to come up with a reason why to would raise to Agr only when the subject is PRO. Otherwise (9a), where the adverb can occur before to, would be incorrectly ruled out:

(9)  a.  It would be a problem for Kim frequently/usually to go shopping.

So while it would be possible to construct an account without to raising to Comp, it would require a number of unmotivated stipulations and it would be limited to a particular expansion of IP. On the other hand, the analysis in which to raises to Comp does not require stipulating either that adverbs are more limited in infinitival clauses, or that to behaves differently within the IP depending on whether the subject is lexical, and it does not depend on any particular expansion of IP. I will therefore continue to explain the paradigm in (9-15) by claiming that to raises to Comp whenever Comp is available.

4.  Motivation for the movement

Now I will turn to the question of why to raises to Comp. There are two sides to attack this problem from: either Comp needs to be filled, or there is some restriction on to that cannot be satisfied in an infinitival CP if to remains in Infl.

4.1.  The ECP approach

Whitman (1991) follows Stowell (1981) and Lasnik and Saito (1992) in claiming that a version of the Empty Category Principle applies to Comp, forcing Comp in most instances to be filled by some overt item. In an infinitival CP, Comp can be filled by a preposition for, as in (22a), or it can start out empty, as in (22b). The structure in (22b) would be ruled out as a final derivation because according to the ECP, Comp cannot be empty. The only way to save the sentence is to raise to to Comp. This is shown in (22c).

(22)  a.  It would be a problem [CP [C for] Kim to go shopping].
    b.  *It would be a problem [CP [C to] PRO to go shopping].
    c.  It would be a problem [CP [C to] PRO to go shopping].

There is some data that rules out this analysis. In (23) we have a tensed embedded clause with where in Spec,CP and no overt Comp:
(23) I don’t know \([_{\text{CP}} \text{ where } _{\text{C } 0} \text{ he did that}]\).

In this sentence the ECP is apparently satisfied, presumably by *know governing the empty Comp. In the parallel sentence in (24) with an infinitival embedded clause, the ECP would also be expected to be satisfied in the same manner as for (23):

(24) I don’t know \([_{\text{CP}} \text{ where } _{\text{C } 0} \text{ PRO to do that}]\).

However, the adverb placement and floated quantifier data in (25) indicates that *to has still moved to Comp. (25a,c), with the adverb or quantifier before *to, is ungrammatical. When the adverb or quantifier follows *to, as in (25b,d), the sentence is fine:

(25) a. *I don’t know where frequently to do that.
    b. I don’t know where to frequently do that.
    c. *They don’t know where all to meet.
    d. They don’t know where to all meet.

(25) indicates that *to has necessarily raised to Comp, even though the ECP should be satisfied without *to raising to Comp. This argues against using the ECP to motivate the movement.

4.2. *To and the Case Filter

We are then left with the second possibility, that there is some restriction on *to that cannot be satisfied in an infinitival CP with an empty Comp if *to remains in Infl. The salient fact about exactly those infinitival clauses in which *to raises to Comp is that they are the clauses in which the IP is not governed. The CP is governed, so *to is in fact raising to the nearest governed position. When the subject is lexical and *to remains in Infl, the IP is governed by a preposition in Comp or by a matrix verb. The logical conclusion is that *to must be governed. I will claim that this government requirement is actually a requirement that *to receive Case.

Extending the Case Filter to infinitival Infl is complicated by the murkiness of English Case-assignment. Case is realized overtly in English only on pronouns. In some constructions, such as gerunds with accusative subjects, it is not even clear what assigns Case to the subject. Infinitival IPs occur as the complement of a Case-assigner and are thus not problematic. However, infinitival CPs can occur in adjunct position, which is canonically thought of as not Case-marked.

Kayne (1983) proposes that English has a null Case-assigning preposition as part of his account of ECM constructions. If we allow this
null preposition to take a CP complement, then Case can be assigned to any infinitival CP and we achieve the desired result. Alternatively, we can follow Stowell's (1981) argument that English infinitives are inherently Case-marked. Interpreting this to mean that an infinitival CP is inherently Case-marked, again to can raise to Comp, receive Case, and satisfy the Case Filter. A final alternative is to claim that adjuncts are actually assigned some sort of Case by the head they are adjoined above. NPs are not licensed as adjuncts, either because the Case is not appropriate for NPs or because English imposes categorial restrictions on adjuncts. Whichever mechanism is chosen, to does not receive Case if it remains in Infl. The data in section 3 show that to raises to Comp, and this movement is motivated if we apply the Case Filter to to.

Interestingly, Old English demonstrated overt Case-marking on infinitives. This can be seen in contexts where the preposition to assigned dative case to an infinitival verb, as in (26a):

(26) Old English (from Mitchell (1968))
   a. Is eac to witanne
      to-note-Dat
      'It must also be noted.'
   b. ...ut eode ahyrian wyrhtan
      to-hire
      '...went out to hire workers.'

Apparently Case is still assigned to infinitives in Modern English.

5. Interaction with negation

To account for the syntax of negated infinitival clauses, I will adopt the expanded IP proposed in Foley (1992). In this analysis, shown in (27), the hierarchical order of functional projections is AgrP, NegP, TenseP. Not is the head of NegP, and to is located in Tense or some lower functional projection.

---

10 The model in Mitchell (1993) would serve equally well, being functionally equivalent to Foley's model in all relevant areas.
5.1. The problematic data

With to in the head of Tense, and not in the head of NegP, the order we should expect in a negated infinitival IP is not to. This is the order we find:

(28) I want [IP Carl not to hang around with those other kids].

In a negated infinitival CP we also find the order not to:

(29) Carl wants [CP not to be ordered around].

This is in contrast with the adverb and floated quantifier placement evidence we examined above, where to moved to initial position in an infinitival CP. However, there is data which indicates that to still raises to Comp in a negated infinitival CP.

(30) shows an infinitival clause with both negation and an adverb:

(30) a. I expect [IP Jill frequently not to go shopping].
b. I expect [IP Jill not to frequently go shopping].
c. *I expect [CP frequently not to go shopping].
d. I expect [CP not to frequently go shopping].
In (30a) *frequently* appears before *not to*, and in (30b) *frequently* appears after *not to*. In principle, then, *frequently* can adjoin either above or below *not to*. In (30c-d), infinitival CPs, we see that *frequently* can not appear above *not to*. Apparently *to* has moved to Comp in these negated infinitival CPs, and *not* is also located somewhere in the Comp projection.

The floated quantifier data in (31) mirrors that in (30):

(31)  
   a. We want [IP them (all) not to have to leave].
   b. We want [IP them not to (all) have to leave].
   c. They want [CP (*all) not to have to leave].
   d. They want [CP not to (all) have to leave].

In the infinitival IPs in (31a-b), *all* can appear either above or below *not to*. But in the infinitival CPs in (31c-d), *all* can only appear below *not to*. Again, *to* has apparently moved to Comp in the CP clauses, and *not* is somewhere above it.

5.2. A possible solution

The facts suggest that *to* is in Comp. *Not* comes before *to*, but sentential *not* does not normally appear in the Comp projection. I propose that the explanation can be found by extrapolating from the one established situation in which sentential negation does appear in Comp: when *not* has contracted with an auxiliary and the resulting form has raised to Comp, as in the questions in (32):

(32)  
   a. [CP Didn't_i [IP you t_i clean your room]]?
   b. [CP Won't_i [IP your father t_i be disappointed]]?

In both examples, sentential negation ends up in Comp because it is attached to the auxiliary.

I propose that this is exactly what happens with *not to* in infinitival CPs. If sentential *not* is a bound morpheme, then it will require a host. The result would be *to* raising to Comp:
In (33) *to* has raised from Tense and adjoined to *not*. When Comp is empty, the entire *not to* unit subsequently raises to Comp:

This explains the otherwise troublesome data in (30-31).

5.3. Consequences

Claiming that *not* is a bound morpheme makes some strong predictions. In a negated infinitival CP, *to* should not be able to raise to Comp by itself. The structure would be as in (35), and it would be ruled out because *not* would not be supported:
Sentences with *not* following *to* are grammatical, as in (36), but these constructions are constituent negation, rather than sentential negation.

(36)  
   a.  I want to not get locked out of my apartment.  
   b.  It would be a problem for Mary to not pass her exam.

Assuming that VP-ellipsis elides an entire phrase, we can use VP-ellipsis as a test of whether *to not* can be sentential negation. If *not* is sentential negation, generated in Neg, then VP-ellipsis should be allowed. If *not* is constituent negation, located in (and negating) the verb phrase, then VP-ellipsis should necessarily also elide *not*. This is shown in (37), where *not* occurs after *to* and VP-ellipsis is ungrammatical:

(37)  
   a.  *You may want to die, but I want to not.*  
   b.  *It would be a problem for Mary to not pass, but it would be fine for Susan to not.*

The sentential negation order *not to* is shown in (38) and VP-ellipsis is grammatical:
(38)  a. You may want to die, but I want not to.
      b. It would be a problem for Mary to not pass, but it would be
         fine for Susan not to.

The infinitival data is explained by analyzing sentential not as a bound
particle. For tensed clauses, the contracted form of not in (32) can be
analyzed either as a phonological process or as a bound form of not, but
uncontracted not has traditionally been analyzed as a free morpheme
(Klima (1964), Laka (1990), Ouhalla (1990)). If not is bound, then any
occurrence of not being separated from the uppermost auxiliary should be
constituent negation. An obvious case to look at is raising of an auxiliary
to Comp. (39a), with have not in Comp, is ungrammatical, but (39b) seems
to be constituent negation:

11 Lopez (1992) achieves a similar effect to analyzing not as a bound
morpheme for tensed clauses by arguing that an auxiliary must raise
through Neg to avoid violating the Head Movement Constraint. However,
this would not easily extend to infinitival clauses, since to does not raise
above Neg.

12 Testing VP-ellipsis in these constructions yields interesting results. In a
simple question with a full NP subject, placing not after the subject and
eliding the verb phrase appears to be quite ungrammatical:

(i)  a. The undergraduates have registered for classes.
     b. Have the graduate students not registered?
     c. *Have the graduate students not?

On the other hand, a tag question with a pronominal subject between the
auxiliary and not is much better:

(ii) a. Kim and Chris have gotten engaged, have they not?
      b. ?Mary has a radical haircut, does she not?

There is reason to believe that tag questions are not formed like full
questions, and are therefore not relevant to my analysis. In ordinary cases
of VP-ellipsis, the verb phrase is only optionally elided. Tag questions,
however, cannot repeat the full verb phrase. To whatever degree they are
grammatical, they are akin to sentences as in (iii):

(iii) a. I guess not.
      b. I think not. (formal register)

I do not take not in (iii) to be an example of sentential negation, because
rather than occurring below the subject (and auxiliary) of the clause, not
has replaced the entire embedded clause. I will leave the account of this
different form of not for future research.
(39)  a. *Have not you raised chickens?
    b. Have you not raised chickens?

Apparently the ungrammaticality of (39a) is due to a mandatory application of the contraction rule when a negated auxiliary moves to Comp. Note that some speakers find (39a) acceptable in a more formal register, providing further support for not adjoining to the auxiliary.

In (40) we can see that when an adverb separates the auxiliary from not, VP-ellipsis does not leave behind not, suggesting that again the not is constituent negation:

(40)  a. Our neighbors have usually not held loud parties.
    b. *Our friends may often hold loud parties, but our neighbors have usually not.

Floated quantifiers demonstrate the same contrast:

(41)  a. My parents have both not seen the Eiffel Tower.
    b. *My aunt has seen the Eiffel Tower, by my parents have both not.

That adverbs\textsuperscript{13} and quantifiers cannot intervene between the auxiliary and sentential negation is further support for analyzing sentential not as a bound particle.

Once not is analyzed as a bound morpheme, a new rationale for "do-support" in negation contexts is available. "Do-support" is the phenomenon where a negated clause that contains no auxiliaries requires that do be inserted, as in (42):

(42)  a. Charlie walked the dog.
    b. *Charlie not walked the dog.
    c. *Charlie walked not the dog.
    d. Charlie did not walk the dog.

\textsuperscript{13} There are some instances where an adverb can intervene between an auxiliary and not and ellipsis can still occur:

(i)  a. They will probably not.
    b. John can certainly not.

While these pose a problem for accounts of VP-ellipsis, I believe these are more related to the sentences discussed in fn. 12. Notice that (ib) is different in meaning from the equivalent sentential negation John certainly cannot. As with the sentences in fn. 12, this is an area for future research.
The standard account (cf. Pollock (1989)) has been that not blocks tense and agreement from lowering to the verb. We can instead view “do-support” as the result of inserting do to host the negation.

The claim that sentential not is a bound item cleanly accounts for the infinitival data at the beginning of this section, where to must precede adverbs and floated quantifiers, and not necessarily precedes to. The data from tensed clauses, demonstrating that nothing can intervene between an auxiliary and sentential not, further supports this idea.¹⁴

6. Conclusions

By looking at the possible locations of adverbs and floated quantifiers, I have established that to raises to Comp any time that Comp is present and empty. I argued against motivating this movement by appealing to the ECP, because the movement occurs even when an ECP account would not apply. I argued instead that to needs to be governed. When there is a preposition in Comp or when there is no CP, to is governed in Infl. In an infinitival CP with a PRO subject, the IP is ungoverned and to raises out of Infl to the closest governed position: Comp. I further argued that the government requirement on to is actually a requirement that to receive Case. Finally I looked at how the data from negated infinitival clauses could be made consistent with my analysis, and argued that the not of sentential negation is a bound element. In the contexts where to would normally raise to Comp, not to raises to Comp as a unit. This solved the problems with the negation data, and I showed that data from tensed clauses is consistent with the idea that not is a bound morpheme.

¹⁴ One remaining objection might be that most bound morphemes in English are prefixes or suffixes that attach to only one side of a word, while not can adjoin to the right of an auxiliary or have to adjoined to its right. However, parallel behavior is demonstrated by Sino-Korean morphemes in Korean, which can compound on the left or the right of other morphemes, but cannot occur alone. One could further distinguish not from standard English affixes if it is attached to another morpheme in the syntax, rather than in lexical word-formation. If to is below Neg, while tensed auxiliaries are above Neg, then their respective negated ordering preserves the original morpheme order. This requires auxiliaries generated below Agr to raise past Neg, but this should not interfere with the auxiliary governing its trace; not is not a verbal head and should not be a potential governor for the trace of the auxiliary.
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Negation and the Tense-Agreement Relationship in French and English

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1. Introduction

A recent debate in the literature on the Principles and Parameters framework concerns a possible universal ordering of functional categories. This debate has been particularly important to analyses which have posited a functional category NegP to explain verb-negation order in cross-linguistic structures. Pollock (1989), Ouhalla (1990) and Laka (1990) have all argued that the position of NegP (as well as other cross-linguistic differences) explains the word order contrasts in the French and English examples in (1).

(1)  a. Pierre ne visite pas le Louvre.
    Peter ne visits pas the Louvre
    'Peter does not visit the Louvre.'

    b. *Pierre ne pas visite le Louvre.

    c. *Pat visits not Chris.

    d. *Pat not visits Chris.

    e. Pat does not visit Chris.

Of these three analyses, only Pollock's maintains a single cross-linguistic order of functional projections. Pollock further proposes the division of Inflection into separate functional categories, Tense and Agreement; NegP appears below Tense but above Agreement. Pollock claims that English and French differences are due to a fundamental difference in the nature of Agreement: Agreement features are 'strong' in French, and cause the verb to move, while they are 'weak' in English. Furthermore, in French, a verb which has raised to Agreement can assign a θ-role from this raised position, while in English, Agreement is opaque to θ-assignment.

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Ouhalla and Laka differ from Pollock in that they propose that the position of NegP differs from language to language, arguing that hierarchical differences, along with additional constraints (Laka), predict the French/English differences.

All three accounts draw on notions of barrierhood and minimality constraints on movement of verbal elements past negation. All rely on the ordering of Tense above Negation.

This paper presents arguments that the cross-linguistic variation shown in (1) can be better explained under the new minimalist program proposed in Chomsky (1992), if a modified version of Pollock’s account is adopted. Specifically, this paper maintains Pollock’s hypothesis that a single ordering of functional projections exists across languages, but provides evidence that NegP appears above TP, rather than below. This reordering has been proposed previously by Belletti (1990) and Haegeman (1992).

Section 2 gives details on the French/English difference to be explained, and summarizes Pollock’s account of the differences. Section 3 presents problems for Pollock’s proposal. These problems involve infinitival data, and none of them has a satisfactory account in Laka’s or Ouhalla’s proposal. Section 4 presents the reordering of NegP (above Tense and below Agreement) proposed by Belletti and Haegeman. Section 4 also readdresses Pollock’s data: using this revision to his account, the French and English data can be explained according to the proposals in Chomsky (1992). Section 5 draws conclusions.


The sentences in (1), repeated here, demonstrate a fundamental difference in French/English word order, discussed in detail in Pollock (1989) and Ouhalla (1990).

(1)  
  a. Pierre ne visite pas le Louvre.  
      Peter NEG visits NEG the Louvre  
      ‘Peter does not visit the Louvre.’
  
  b. *Pierre ne pas visite le Louvre.
  
  c. *Pat visits not Chris.
  
  d. *Pat not visits Chris.
  
  e. Pat does not visit Chris.

A tensed lexical verb appears between the French particles *ne and *pas, as in (1a), and cannot appear after *pas, as shown in (1b). In English, however,
the tensed lexical verb cannot appear either before or after *not*, as seen in (1c-d). A tensed auxiliary verb must appear before *not*, as in (1e).

Pollock proposes that at least in some languages, including French and English, negation heads its own functional projection, NegP. He proposes that what has traditionally been termed InflectionPhrase be split into TenseP and AgreementP. He assumes that a single ordering of these functional categories holds for English and French. This is shown in the tree in (2).

(2)
\[
\begin{align*}
I & \quad \text{(Tense) \ P} \\
   \quad & \quad \text{NegP} \\
   \quad & \quad \text{AgrP} \\
   \quad & \quad \text{VP}
\end{align*}
\]

(As mentioned above, Laka 1990 and Ouhalla 1990 posit differences in the order of functional projections across languages.) In this structure, the French particles *ne* and *pas* and the English particle *not* all appear inside NegP.

Pollock claims that French and English Agreement (Agr) differ in their ability to 'attract' the verb (cause it to raise) and to permit transmission of θ-roles. In French, Agr is 'transparent' to assignment of θ-roles—that is, the verb can assign thematic roles to its arguments from within the agreement projection. For Pollock, *ne* occupies the position of head of NegP, while *pas* occupies SpecNeg.

(3)
\[
\begin{align*}
TP & \\
   & \quad \text{T} \\
   & \quad \text{NegP} \\
   & \quad \text{Spec} \\
   & \quad \text{pas} \\
   & \quad \text{Neg'} \\
   & \quad \text{Neg} \\
   & \quad \text{ne} \\
   & \quad \text{AgrP} \\
   & \quad \text{Agr} \\
   & \quad \text{VP} \\
   & \quad \text{V}
\end{align*}
\]

The verb starts in V, moves to Agr, moves to Neg, where *ne* cliticizes to it, then moves up to Tense. This derives (1a), 'Pierre ne visite pas le Louvre.' The verb cannot remain below negation, as in (1b), 'Pierre ne pas visite le
Louvre', because it would not have acquired the tense affix. (The possibility of a tensed verb remaining in V must be ruled out for Pollock's account to work.1)

In English, Pollock argues, Agr is weak and cannot 'attract' the verb to move. Agr is also opaque to assignment of θ-roles: that is, a verb which has moved to agreement in English cannot assign thematic roles to its arguments. This rules out the order in a sentence like (1c), 'Pat visits not Chris.' The tree in (4) shows this illicit derivation.2

(4) Derivation ruling out (1c) ('Pat not visits Chris')

Pollock explains the ungrammaticality of (1d), 'Pat not visits Chris,' by claiming that NegP is a barrier to government of a trace in Agr which is left after raising of an Agr element to Tense. (Details on this are given below.) Finally, Pollock argues that an English verb which has no θ-role to assign can raise to Agr and to Tense. (The θ-opacity of Agr poses no problem for these verbs, which include have, be, do, and modals.) This

1 Pollock rules out the possibility that features can lower from tense to the verb by relying on the fact that the trace of the lowered features would be left ungoverned, an ECP violation, which could only be rescued by movement at LF. This movement is ruled out by a 'principle of least effort.' I will argue that the proposal in this paper yields a less complicated way of ruling out the possibility that a tensed verb remains in V0 in French.

2 A complication for Pollock is that he has to assume that feature-lowering is possible to derive an ordinary sentence like 'Pat visits Chris.' He has to assume that the trace which is left by lowering of features in English is rescued at LF, by raising of the verbal complex. He has to assume that this raising is impossible when negation is present. I will argue that this complication can also be eliminated.
derives (1e), 'Pat does not visit Chris.' This derivation is shown in (5).

(5) Derivation for (1e) ('Pat does not visit Chris')

In summary, the features of Pollock's proposal which are most important to this paper are his insights that verb movement could be split into multiple steps, and that the ability of raised verbs to assign θ-roles could vary from language to language. Pollock proposes a single order of functional projections across French and English. The derivation of the French and English difference is complicated in places, requiring feature

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3 A final complication for Pollock is that he has to assume that *not* does not block head movement. Movement across *not*, or any head category, would normally violate the head movement constraint.

4 The summary in this section is greatly simplified. Pollock uses data on adverb placement to support his split-Infl theory.

(i) Pierre visite souvent le Louvre.
   Peter visits often the Louvre
   'Peter often visits the Louvre.'

(ii) *Pierre souvent visite le Louvre.

(iii) *Pat visits often Chris.

(iv) Pat often visits Chris.

For Pollock, the comparison of adverb and negation data gives several important generalizations.

(v) 'Short verb movement' (to Agr) is possible only for non-θ-assigning verbs in English and tensed clauses.

(vi) Verb movement (VM) to T is possible for the same verbs in French infinitival clauses. I will address this result in Section 4.
lowering and the rescuing of ungoverned traces by LF movement.

3. Revision of Pollock’s proposal

3.1 Problems for Pollock’s proposal

The data in (6-9) pose problems for Pollock.

(6) Pat went home but Chris did not.
(7) *Pat went home but Chris not did.
(8) *We planned to not get lost, and we tried to not.
(9) We planned not to get lost, and we tried not to.

The ungrammaticality of (7) can be explained, in any account, by whatever explains the unacceptability of the order ‘not did’: a sentence like ‘Chris not did go home’ is ungrammatical, so (7) is not ruled out because of a requirement on the ellipsis tag.

In contrast, the first clause of (8) is well-formed. It can only be a requirement on the ellipsis tag that rules this structure out. The contrast in (8-9) is therefore specific to infinitivals and VP ellipsis, and must be due to either a property of infinitivals, or a property of VP ellipsis structures.

(8) could represent one of two cases: not could be a constituent negator, negating the VP, or not could be a sentential negator. If not here is sentential negation, there would be no reason to rule out the sentence. There seems to be no general restriction on not preceding a VP ellipsis trace, shown by (6). However, if not here is constituent negation, the ill-formedness of the sentence is expected: VP ellipsis should omit the entire VP.

---

5 Here, constituent negators adjoin to the projection they modify. For example, in (i), not modifies the NP containing Chris.

(i) Pat likes not Chris but Kim.

6 López (1992) and Zagona (1988) argue that VP ellipsis traces must be governed. The requirement that a VP (TP) ellipsis trace can be governed by Neg (López 1992) would not account for (8). However, here I set aside the question of how government of VP ellipsis traces affects the analysis of sentences with infinitival to.

7 A wide range of evidence suggests that in a VP ellipsis structure, the entire VP must be omitted. However, Kuno (1975) argues that VP adjuncts can be left behind. This would be a problem if not as a constituent negator is a VP adjunct.
A reasonable conclusion is that (8) is ruled out because not in this sentence can only be a constituent negator. Therefore, there is no position above not which infinitival to can occupy. This leads to the conclusion that if to is generated in tense, there must be a Tense projection below Negation.

This evidence is a problem for Pollock. He proposes that TenseP dominates NegP, which dominates AgrP (see (2) above). There is no place for to in his derivation except above Negation, in TP. He states that the word order in sentences like (9) is derived by lowering of T to adjoin to VP. However, this is a problem for VP ellipsis: to would have to obligatorily lower and adjoin to the empty VP. It is not clear how this obligatory lowering would fit into his general scheme.

3.2 Solution to problems posed by infinitival data

The ordering of Tense above Negation is a problem in Pollock’s account (as well as other accounts). Belletti (1990) and Haegeman (1992) propose the revised phrase structure in (10).

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8 Bernstein (1992) has argued that to can move to Comp. This involves positing that not is actually a bound morpheme, and that to adjoins to the right of not.

9 Laka (1990) is the only analysis with a straightforward account for the order not-to in English. However, Laka seems to assume that to is generated inside VP. Her account would have no way of accounting for the acceptability of (9), because presumably the entire VP is omitted in VP ellipsis.

10 Pollock considers the possibility that to could be generated either in Agr or Tense (fn.9). However, it seems unlikely that a [-finite] tense marker would be generated in an Agreement projection.

11 Ouhalla (1990) has to resort to a similar lowering of to, and Laka (1990) simply assumes that to is inside the VP. It is not clear how her analysis, or Ouhalla’s, would deal with VP ellipsis and infinitivals.
(10) reverses the order of Agr and Tense from Pollock's tree. By retaining Pollock's insight that verb movement occurs in steps and that languages can vary in whether or not θ-roles can be assigned from raised position, and adopting this revision in the hierarchical order, the French/English difference can be explained under Chomsky's (1992) minimalist approach to movement rules.

4. Derivation of the French/English contrast

4.1 Introduction

This section contains, first, a summary of the proposals in Chomsky (1992) which are relevant to the new analysis of the French/English contrast. Second, it includes an explanation of how his proposal, the assumption that NegP appears above TenseP in both English and French, and two additional assumptions account for the contrast in general. This section readdresses Pollock's adverb and infinitival data.

4.2 Summary of Chomsky's (1992) proposals

The most important of Chomsky's proposals for this analysis begin with his definitions of domain relations (pp.15-19). Here, Chomsky's definitions are listed, along with examples which refer to the tree in (15) (Chomsky's (11) on p.22).

(11) $\alpha$ contains $\beta$ if some segment of $\alpha$ dominates $\beta$.

In (15), nodes contain what they dominate.

(12) $\text{MAX}(\alpha)$ is the least full-category maximal projection dominating $\alpha$.

In (15), $\text{MAX}(\gamma)=\text{YP}$. 

domain of a head \( \alpha \) is the set of nodes contained in \( \text{MAX}(\alpha) \) that are distinct from and do not contain \( \alpha \).

In (15), the domain of \( Y \) is \{Spec2, ZP\}, and anything that Spec2 or ZP dominates.

Let \( S \) be any set of categories, such as the set of categories which make up the domain of a certain head. MIN(S) or minimal S is the smallest subset \( K \) or \( S \) such that for any \( q \in S \), some \( \beta \in K \) reflexively dominates \( q \).

To be more specific, the minimal domain of a head \( \alpha \) is the smallest subset of the nodes in the domain of \( \alpha \) such that each member of the domain is reflexively dominated by some member of that subset.

In (15), the minimal domain of \( Y \) is \{Spec2, YP\}, but NOT anything that Spec2 or ZP dominates.

Chomsky also extends these definitions to chains (pp.18-19).

For a chain \( \text{CH} = (\alpha_1, ..., \alpha_n) \), the domain of \( \text{CH} \) is the set of nodes contained in \( \text{MAX}(\alpha_1) \) and not containing any \( \alpha_i \).

In (15), if \( Y \) raises to \( X \) and adjoins, forming \([Y X]\), and leaving a trace in \( Y \), then \( \text{CH} = ([Y X], t) \). The minimal domain of \( \text{CH} \) will be \{Spec1, Spec2, ZP\}.

The result which will be useful here is Chomsky's account of how the internal object in his analysis of VP can raise above the subject (or the subject trace). Chomsky gives the specific version of (15) that appears in (17) (his (12) on p. 22):
Chomsky relates many different movement constraints (including "phenomena of superiority...and relativized minimality," p.20). He states that they have in common the failure of an element to make the "shortest move" possible. Chomsky's new program seeks to capture many movement violations under a single economy-related "shortest movement" constraint. Movement can take place only to the nearest target, or to one of several "equidistant" targets. He proposes the condition in (18) (p.24).

(18) If $\alpha, \beta$ are in the same minimal domain, they are equidistant from $q$.

If V raises and adjoins to $\text{Agr}_O$, a chain is formed: SpecV and SpecAgr$_O$ are both in the minimal domain of this chain. SpecV and SpecAgr$_O$ are therefore equidistant targets for movement. The object can move to SpecAgr$_O$, crossing the subject or its trace, without violating any movement conditions.

This movement possibility will be useful in explaining the negation data.

4.3 Explanation for the French/English contrast

4.3.1 Assumptions

Assume the tree in (10), repeated here as (19), for both English and French.
Two additional assumptions are necessary. The first is similar to Pollock’s notion of $\theta$-opacity. The assumption is that a lexical verb must remain in $V^0$ in English, possibly for $\theta$-assigning reasons. A lexical verb in French may raise.

The second assumption concerns movement of subject and verb. Chomsky (1992) assumes that as in Pollock’s proposal, Agreement features are “weak” in English, and “strong” in French. In line with his new proposal, he states that Agreement features will not cause a derivation in English to crash at Spell-out if they are not checked, but they will cause a derivation in French to crash at Spell-out if they are not checked.

Here, I replace this assumption with a closely related requirement. I assume that nominative Case assignment requires the subject and tensed verb to be in a Spec-head relation like that posited for the Wh-criterion (Rizzi forthcoming) and the Neg-criterion (Haegeman to appear). Whenever nominative Case is assigned, the subject and tensed verb must meet this requirement, at some level, in an Agr projection. (This is a projection whose function is only to check this relation.)

I will assume that in English, the subject must move to SpecAgr before Spell-out, while the verb can move at LF. In French, both the tensed verb and the subject can move before Spell-out. This agreement relation will not have to be met for infinitivals, which do not involve nominative Case.

In the framework of Chomsky (1992), these assumptions may be

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12 The requirement must be included in any account to explain sentences like (i) and (ii).

(i) *Not Pat visits Chris.
(ii) Pat often visits Chris.
preferable to the assumption that Agr can be 'strong' or 'weak.' Under these new assumptions, cross-linguistic variation results when Spell-out occurs at different points in derivations across languages. Furthermore, these assumptions make the prediction that nominative Case assignment will always require a Spec-head relation between the nominative NP and the verb.

4.3.2 Negation contrast

If these assumptions hold, the contrast in negation data can be explained. The relevant French cases are repeated as (20).

(20)  a. Pierre ne visite pas le Louvre.
     b. *Pierre ne pas visite le Louvre.

Under the assumption that ne occupies Neg0, and pas occupies SpecNeg, the verb adjoins to Neg and raises to Agr. When this movement occurs, a chain forms; CH = ( [ Agr [ Neg [ T [V] ] ] ), t ) The minimal domain of CH is {SpecAgr, SpecNeg, TP}. SpecAgr and SpecNeg will therefore be equidistant movement targets to anything within TP, because they are both in the minimal domain of the chain formed by movement of the verbal complex from Neg to Agr. This will allow the subject to move across SpecNeg: pas will not interfere with movement of the subject.13 This derivation is shown in (21).

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13 Pollock's adverb data show the same effect.

(i) Pierre visite souvent le Louvre.
   Peter visits often the Louvre
   'Peter often visits the Louvre.'

(ii) *Pierre souvent visite le Louvre.

The lexical verb must raise past the adverb.
(21) Derivation of (20a) ('Pierre ne visite pas le Louvre')

As discussed above, movement of both the subject and the verb takes place before Spell-out.

To account for the English data, I draw on the assumption that lexical (θ-assigning) verbs must remain in V₀. Therefore, no verb which assigns

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14 Chomsky’s explanation for these facts is different. He assumes that the ‘weak’ agreement features in English will not cause a derivation to crash at Spell-out. The ‘procrastinate’ principle that he defends will ensure that the lexical verb CANNOT move in English. Chomsky argues in detail that an individual lexical item will only move to satisfy its own immediate requirements—if movement can be put off until LF, it will, even if it causes the derivation to crash. Therefore, overt verb raising is barred in English, explaining (16c). He argues that verbs like be and have are ‘light’ verbs, and are invisible to LF rules (p. 43). He concludes that if these verbs do not raise overtly, the derivation will crash.

There are two problems with this approach. The first is that there would be no reason for be or have to raise at all: he argues that in the case of lexical verbs, no overt raising occurs, because verbs will raise only to satisfy their own requirements, and not to save a derivation from crashing. Be and have should be similarly prevented from moving.

A second problem is that not only have and be raise in English. Modals like should also raise. These verbs cannot be argued to be semantically empty.

Both problems are solved under the assumption that only the
a thematic role can raise in English, at any point. Verbs which do not assign thematic roles can raise. (The question of whether or not they must raise is discussed below.) This rules out cases like (20c), and rules in cases like (20e).

(20)  
  c. *Pat visits not Chris.
  d. *Pat not visits Chris.
  e. Pat does not visit Chris.

The auxiliaries \textit{have}, \textit{be}, and \textit{do}, as well as modals, do not assign thematic roles, and therefore can raise in sentences like (20e) ('Pat does not visit Chris').

(20d), however, is not explained: the verb should be able to meet nominative Case agreement requirements at LF, since it cannot move. In fact, the option to check agreement features at LF has to be available, because in sentences like (20f-g), the verb cannot raise, as shown by (20h).

(20)  
  f. Pat visits Chris.
  g. Pat often visits Chris.
  h. *Pat visits often Chris.

The tree in (22) shows the derivation of (20g).
Derivation of (20g) ('Pat often visits Chris')

(In this derivation, the verb moves to Agr at LF.)

Pollock sought an ECP explanation for sentences like (20d) ('Pat not visits Chris'): the trace of features which would have to raise to Tense could not be governed due to the presence of not. However, given the tree above, and Chomsky's assumptions, a simpler explanation is available.

If the verb remains in T, and cannot raise to check features in Agr, then the chain formed by verb raising ends at T. This would mean that SpecNeg and SpecAgr are not equidistant movement targets in English: they are not part of the same minimal domain of a chain. If SpecNeg is not available as a landing site for the subject, (20d) is ruled out, since the

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15 Specifically, Pollock argues that the (null) head of Agr moves up to Tense in ordinary cases, and that the verb features are later lowered onto V. However, when NegP is present, an ECP violation results. NegP is a barrier to government: it cannot be L-marked by a null (non-lexical) raised complex in these structures, and it blocks government of the trace in Agr (pp.404-6).

16 Most analyses have posited either (i) or (ii):

(i) not occupies SpecNeg and a null head occupies Neg0
(ii) a null operator occupies SpecNeg and not occupies Neg0

I argue that (i) holds in English. Both (i) and (ii) are plausible assumptions, given the tendency in colloquial French to drop ne (which suggests the
subject cannot move to check its own agreement features. In this analysis, therefore, (20d) is ruled out because the subject cannot move out of the VP for feature checking. This derivation is shown in the tree in (23).

(23) Derivation ruling out (20d) ("Pat not visits Chris")

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(23) Derivation ruling out (20d) ("Pat not visits Chris")
          AgrP
            ↑   ↑
         Spec  Agr'  
               ↑       ↑
              Agr  NegP
                ↑       ↑
               Spec  Neg'
                 ↑       ↑
                not  Neg  
                  ↑       ↑
               Spec  TP
                 ↑       ↑
                T  Spec
                  ↑       ↑
                T'  V
                  ↑       ↑
                VP  V
                 ↑       ↑
               Spec  t
                  ↑       ↑
                T  v
                  ↑       ↑
              visits  V
                   ↑       ↑
            T'  v
                  ↑       ↑
          Spec  t
            ↑       ↑
          AgrP
```

Under the assumptions above, the verb moves only to T⁰. While the subject can move to SpecT, further movement is impossible: SpecNeg is occupied, and movement beyond SpecNeg would be ruled out. (Under Chomsky's assumptions, an element may only make the "shortest move possible."")

The same movement is possible in (24), which shows the derivation of (20e).

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17 Again, the arguments in this section rely on the assumption that the subject must occupy the site of nominative Case checking before Spell-out.
(24) Derivation of (20e) ('Pat does not visit Chris')

In this example, movement of the verb from Neg$^0$ to Agr$^0$ has created a chain whose minimal domain is \{SpecAgr, SpecNeg, TP\}. SpecNeg and SpecAgr are therefore equidistant targets for movement, and the subject can raise to SpecAgr.

This analysis suggests that auxiliaries optionally raise in English. In a negative sentence, however, a derivation where the auxiliary does not raise will crash, since the subject will be trapped in SpecV position.

4.3.3 Adverb contrast

The assumption that the verb in English must remain in V$^0$ gives Pollock's 'short VM' contrast.

(25)  
  a. *Pat visits often Chris.
  b. Pat often visits Chris.
  c. Pierre visite souvent le Louvre.
  d. *Pierre souvent visite le Louvre.

In French, the verb can and must move before spell-out. (These sentences pose no problem for movement of the subject.)

4.3.4 Infinitive contrast

This analysis can account for the English infinitival data given above. Infinitival verbs in English do not display agreement. Since only [+finite]
elements raise for checking of agreement features for nominative Case, to stays in Tense in English sentences like those in (26-27).

(26)  We tried not to get lost.
(27)  We tried to not get lost.

(In (26), not is a sentential negator, and in (27), not is a constituent negator.)

The French infinitival data is partially explained in the same way that the English data was explained: raising to a nominative Case-checking position is not necessary, since no Nominative Case is assigned. The contrast is shown in (28-29):

(28)  Ne pas visiter le Louvre...
(29)  *Ne visiter pas le Louvre...

Pollock supports the ordering of Tense above Neg with French infinitival data. He argues first that the same verbs which undergo short VM in English, non-θ-assigning verbs, can move above negation in French:

(30)  Ne pas être content...
     ne not be-INF happy
     'Not to be happy...'
(31)  N’être pas content...

He argues that [-finite] tense (above Neg for him) is opaque to θ-assignment, and that only non-θ-assigning verbs can move to it. A drawback to this analysis is that there seems to be little motivation for this movement, if it is possible.

If être, avoir, and modals are generated in Tense, below Neg (as suggested in the analysis in this paper), there may be an explanation. Pollock points out that the head ne seems to be affixal—it seems to need to attach to T⁰, like other clitics. Elements generated in T⁰ may move into Neg to support ne. However, (30) shows that ne can move without support of an element in T⁰ (if être is generated in T⁰).¹⁸

Bernstein (1992) has suggested that ne may be supported by a null

¹⁸ A further problem here concerns why these elements cannot stay in Neg once they are there, affixed to ne. This may be related in some way to the Neg criterion (Haegeman to appear) and to what can occupy a position in NegP.
element from $T^0$ in sentences like (28). This would mean that être in (30) would have to be generated elsewhere. This would also require a reason for movement out of Neg (see footnote 20).

Short VM is possible in French infinitival clauses, as Pollock points out.

(32) A peine parler le français...
    hardly speak-INF French
    'To hardly speak French..'

(33) Parler à peine le français...

[-Finite] tense would have to be checked by movement into tense either before or after spell-out.\(^\text{19}\)

5. Conclusions

Several assumptions are necessary for an explanation of the French/English verb movement data.

(i) Negation appears above Tense in both French and English.
(ii) Lexical verbs in English remain in $V^0$.
(iii) Nominative Case assignment requires a Spec-head relation within a separate projection, Agr. Languages can vary as to when the subject and verb must move to Agr.

These revisions to Pollock’s analysis allow amore complete explanation of the cross-linguistic data.

\(^{19}\) Movement of [-finite] verbs, therefore, would be optional—Pollock observes but does not account for the optionality. He accounts for the impossibility of VM above Neg by stating that [-finite] tense is “opaque” to $\theta$-assignment. In this paper, the absence of nominative Case assignment will prevent VM above Neg, but the optionality of short VM is still left unexplained.
References


Sentential Negation in German: Evidence for NegP

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1. Introduction

In this paper, I will demonstrate that we can account for the German negation facts under the hypothesis that negation is expressed in terms of its own functional category negation phrase, NegP, as first suggested by Pollock (1989) for French and English. Furthermore, I will analyze the status of the German negation element nicht ‘not’ with respect to whether it is the head or the specifier of its functional category. The location of the German NegP in the expanded structure of IP will also be examined.

In current GB-Theory, the status of negation is widely debated. As noted by various researchers, there are cross-linguistic differences in word order with respect to negation. The English and French data in (1) illustrate a major linguistic difference:

(1) a. Jean n’aime pas Marie.
        Jean ne likes not Marie
b. *Jean ne pas aime Marie.
        Jean ne not likes Marie
c. John does not like Mary.
d. *John likes not Mary.
e. *John not likes Mary.

In French, as (1b) reveals, a tensed verb cannot follow the negation. It must be situated between the negation particles ne and pas, as illustrated by (1a). In English, however, the main verb must follow the negative particle to form a grammatical negation. Furthermore, as (1c) shows, the tensed auxiliary do, preceding sentential not, must be inserted. (1d, e) illustrate that the failure to do so leads to ungrammaticality. On the basis

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1 I wish to thank Michael Bernstein, Wayne Harbert, Yafei Li, Erika Mitchell, Deborah Yaeger, and two anonymous Working Papers reviewers for their comments and suggestions on earlier versions of this paper.

of these and related facts, various proposals of how to analyze sentential negation have been made.

To adequately account for the different ordering of the verb with respect to negation in English and French, exhibited by the examples above, Pollock (1989) proposes to analyze sentential negation as projecting its own functional category negation phrase, NegP. Furthermore, he suggests separating inflection phrase (IP) into two different functional categories to which he refers as agreement phrase, AgrP, and tense phrase, TP. Based on verb movement facts, he orders AgrP within TP, thus proposing the following complex structure of IP:

\[ \text{(2)} \quad [\text{TP} \ [\text{NP} \ [\text{t} \ [\text{T} \ [\text{NegP Neg AgrP Agr} \ [\text{VP (Adv V)]}]])]] \]

Ouhalla (1990) follows Pollock in arguing that sentential negation is expressed in terms of the category NegP. However, he then modifies Pollock’s analysis, providing syntactic evidence for changing the ordering of the functional categories: Ouhalla orders TP below AgrP. Illustrating that languages differ with respect to the position of NegP in the syntactic structure, Ouhalla suggests that this difference “is the consequence of a more fundamental difference in the selectional properties of the negation categories in...languages” (228). To account for such differences, he proposes the NEG parameter:

\[ \text{(3)} \quad \begin{align*}
\text{a. Neg selects VP} \\
\text{b. Neg selects TP}
\end{align*} \]

According to him, cross-linguistic variations of the order of the verb with respect to negation are due to the position of NegP as well as to other cross-linguistic differences. He illustrates that the position of NegP differs among languages.\(^3\) Furthermore, Ouhalla shows that there are variations among languages as to whether both the specifier and the head of NegP are realized or whether only one of the two is. Following Ouhalla, I will assume that sentential negation is generally expressed in terms of the category NegP, which contains a head and a specifier.

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\(^3\) Ouhalla (1990) analyzes English and Turkish negation facts on the one hand, and French and Berber on the other. Based on these facts, he argues that the difference in the position of sentential negation can be accounted for under the NEG parameter. Presumably, these languages belong to different typological groups: while English and Turkish select NEG parameter value (a), French and Berber select (b).
2. **German Word Order and Negation**

Having illustrated cross-linguistic variations of the position of the negation element, I will attempt, in this section, to solve the puzzle of German word order with respect to negation. However, before turning to the negation facts, a brief introduction to characteristics of German word order is provided.

2.1. **Background**

As is well-known, the order of the verb and its complements seems to vary in German, depending on whether the finite verb appears in a matrix or in an embedded clause. While matrix clauses exhibit SVO word order as in (4a), in embedded clauses, the finite verb must occur in final position, illustrated by (4b):

(4) a. Wir **hatten** gestern Wein getrunken.
   we have yesterday wine drunk
   ‘we drank wine yesterday’

   b. Weil wir gestern Wein getrunken **hatten**.
   because we yesterday wine drunk have
   ‘because we drank wine yesterday’

However, in German it is not the case that matrix clauses always exhibit SVO order. Unlike English, the subject does not necessarily have to precede the finite verb. In declarative matrix clauses, the finite verb must in fact occupy the second position in the clause, a phenomenon that is referred to as the V2 effect:

(5) Gestern waren wir in einem Restaurant.
   yesterday were we in a restaurant

In an embedded clause without a lexical complementizer, the finite verb occurs in second position. However, it is final whenever a complementizer is present:

(6) a. Ich **hoffe**, wir feiern bald.
   I hope we celebrate soon
   ‘I hope that we are going to celebrate soon’

   b. Ich **hoffe**, daß wir bald feiern.
   I hope that we soon celebrate
   ‘I hope that we are going to celebrate soon’
The majority of researchers (cf. e.g. Koster, 1975; Travis, 1984) argue that the underlying German word order is SOV, providing syntactic evidence for their analysis. We will henceforth assume that, underlyingly, German exhibits SOV word order. The SVO order in matrix clauses is then derived by verb raising. According to Koster (1975), this word order contrast can be explained by the obligatory V-movement to C₀ in matrix and the absence of such movement in embedded clauses. In embedded clauses, the complementizer is filled by a lexical element. In contrast to English, a complementizer cannot be freely omitted without leading to ungrammaticality. Since a position cannot be filled by two elements, movement to C₀ is unavailable in embedded clauses: the complementizer is filled. In main clauses, however, the complementizer position is empty and, consequently, allows V-movement to C₀.

2.2. The Problem

Because linear ordering facts appear to indicate that the negator nicht 'not' is part of the VP, the question of whether the NegP-hypothesis holds for German is non-trivial.⁴ (7) illustrates the order of the constituents in matrix clauses: the negative element occurs in postverbal position, henceforth referred to as postverbal negation, i.e. it follows the verb and its NP object. Assuming that the accusative object is a sister of the verb at D-Structure, in embedded clauses, however, nicht appears at S-Structure to intervene between elements that are base-generated in VP, namely the verb and its NP object, revealed by (8):

(7) Sie liest das Buch nicht.
    she reads the book not
    'She doesn't read the book'

(8) Weil sie das Buch nicht gelesen hat.
    because she the book not read has
    'because she hasn't read the book'

Because negatives in V2 languages appear to behave like adverbs of manner with respect to their order in relation to the verb, they have generally been categorized as such.⁵ Like adverbs of manner, they follow

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⁴ The German data will generally be given in subordinate clauses in order to avoid V2 effects in matrix clauses, which are likely to conceal the ordering of constituents.

⁵ Lederer (1969) claims that the German negation element "functions basically like an adverb of manner. It thus moves toward the end of the
the verb in matrix and precede it in embedded clauses. Within the GB framework, the German negator \textit{nicht} has been assumed to be a VP adverb in preverbal position, an adjunct adjoined to \textit{V'} (cf. Webelhuth, 1989) as shown in (9):

\begin{align*}
\text{(9) Weil} & \text{ sie ihren Freund nicht besucht.} \\
& \text{because she her friend not visits}
\end{align*}

\begin{align*}
& \text{\textbf{C}} \\
& \text{\textbf{CP}} \\
& \text{\textbf{C'}} \\
& \text{\textbf{I'}} \\
& \text{\textbf{Spec sie}} \\
& \text{\textbf{VP}} \\
& \text{\textbf{I besucht}_{i}} \\
& \text{\textbf{V'}} \\
& \text{\textbf{Neg \textit{nicht}}}
\end{align*}

their Freund

In embedded clauses, adverbs of manner can occur in two positions, either preceding the NP object as in (10) or following it as in (11). This illustrates that adverbs of manner are freely reorderable:

\begin{align*}
\text{(10) Weil} & \text{ Ed \textit{gründlich} sein Referat schrieb.} \\
& \text{because Ed thoroughly his paper wrote}
\end{align*}

\begin{align*}
\text{(11) Weil} & \text{ Ed sein Referat \textit{gründlich} schrieb.} \\
& \text{because Ed his paper thoroughly wrote}
\end{align*}

If the analysis of German sentential negation as a VP modifier is correct, then the negation element is expected to occur in the same positions as adverbs of manner. However, as illustrated by (9), only the position to the right of the NP object is available for sentential \textit{nicht}. If \textit{nicht} precedes the NP object, the result is constituent negation:

\begin{quote}
sentence field, but precedes other modifiers of manner (since it is a very general term), the modifiers of place, prepositional objects, predicated complements, and the second part of the predicate" (585).
\end{quote}
(12)  Weil er nicht das Buch las.
because he not the book read
‘because he didn’t read the book’

This can be proved by standard constituent tests such as the movement and the coordination test. Only phrasal constituents can undergo movement (cf. Radford, 1990). Furthermore, only constituents of identical syntactic categories can be conjoined:

(13)  Nicht das Buch las er, sondern die Zeitung.
not the book read he but the newspaper
‘he didn’t read the book but the newspaper’

(14)  Nicht das Buch und nicht die Zeitung las er.
not the book and not the newspaper read he
‘he didn’t read the book or the newspaper’

These tests illustrate that [nicht das Buch] is a phrasal constituent: it can be preposed as a single unit in (13) as well as conjoined with a category of the same type in (14). In this case, nicht has scope only over the object, resulting in constituent rather than sentential negation. Furthermore, besides the characteristic intonation pattern stressing the phrasal constituent [nicht das Buch], focus can be observed by adding a contrary rejoinder to the phrase such as sondern ‘but,’ as in (13). The fact that it is only the NP that is negated in (13) is illustrated by the following example:

(15)  *Nicht das Buch las er, sondern ging spazieren.
not the book read he but went for a walk
‘It is not the book he read but went for a walk’

The sentence is ungrammatical if any constituent other than the object is negated, thus supporting an analysis of the order [Neg NP] as constituent negation. If the negation element precedes an object NP, the result is constituent not sentential negation; nicht thus behaves differently from other modifiers, which indicates that an analysis of the German negation element as an adverb of manner cannot be correct.

Let us sum up the results. Within VP the following positions could be available for the negator: specifier, complement, or adjunct. Under the internal subject hypothesis proposed by Koopman and Sportiche (1988), the subject originates in a specifier position of VP, which means that this position is unavailable for the negator. Nicht cannot be the complement of the verb either since this position is occupied by the direct object.

The preceding discussion illustrates that the German negator cannot be
analyzed as an adjunct such as adverbs of manner. Following Santelmann (1991), I propose that the negation is in fact outside of the VP, i.e. it does not form a constituent with VP. Following Pollock (1989), Ouhalla (1990), and Laka (1990), I assume that German sentential negation projects its own phrase, NegP. In accordance with X-bar Theory, there are two possible positions for NegP in the syntactic structure: nicht could be the head or the specifier of NegP.

3. Status of the German negation element

Ouhalla (1990) argues that, in accordance with X-bar Theory, NegP contains a head and a specifier. Thus, nicht could, in principle, either be the head or the specifier of NegP. However, since it is not an affix but always realized as an independent lexical item and, even more importantly, does not block verb raising, there is evidence that German nicht is a specifier rather than a head:

(16) Heike kauft das Buch nicht.
Heike buys the book not
‘Heike doesn’t buy the book’

(17) Heike hat das Buch nicht gekauft.
Heike has the book not bought
‘Heike hasn’t bought the book’

(16) shows a main clause with the verb in second position: the subject is in [SpecCP], and the verb occupies C⁰. The main verb has moved out of its base-position in V⁰ across NegP to C⁰. Following Koster (1975), verb raising always occurs in German matrix clauses: with main verbs in (16) as with auxiliary verbs in (17). The presence or absence of the negation element does not make a difference with respect to verb raising. Under the Head Movement Constraint (HMC), only lexical heads block the movement of other heads. Since the negation element clearly does not block verb movement, I conclude that nicht is the specifier of NegP.⁶

Analyzing the negation element as the specifier of NegP, the question of whether it is positioned on the right or the left periphery of NegP remains to be addressed. Typologically, it seems highly unlikely that nicht is a rightward specifier. All other specifiers in German occur to the left: subject NP’s, WH-phrases, some possessors etc. Thus, it seems reasonable to conclude that the specifier of NegP is a leftward specifier of its own functional category, NegP.

⁶ This analysis is supported by Ouhalla (1990) and Grewendorf (1990).
3.1. Locating NegP

Within NegP, the negation element could in principle occur to the left of VP, [nicht VP], or to the right of VP, [VP nicht]. In German, specifiers are generated to the left while heads can occur to the left or the right. Analyzing nicht to the right of VP has recently been proposed by Grewendorf (1990). His analysis will be discussed in the following section. However, I will later suggest that NegP is situated to the left of VP.

3.1.1. German as SOVNeg - Grewendorf's (1990) Proposal

Grewendorf (1990) proposes generating German sentential negation postverbally as SOVNeg. In his article, he criticizes Webelhuth (1989) who suggests that German sentential negation behaves in an adverb-like manner. Webelhuth analyzes nicht as a left-adjunct to VP, i.e. preverbal. To support his analysis, Webelhuth proposes that VP-constituents that precede VP at S-Structure are “scrambled” out of VP. According to him, object movement is the result of a process to which he refers as scrambling, a reordering of elements for pragmatic reasons.

Grewendorf (1990) criticizes Webelhuth's analysis, mainly because scrambling is defined as optional movement that is not motivated by independent principles. Furthermore, he argues against a preverbal analysis of the negation and suggests that German sentential negation must be generated postverbally. To support his claim, Grewendorf gives three major arguments, a typological, an acquisition, and a historical argument, none of which is unproblematic. These arguments will be discussed in detail in the following section. I will later illustrate that NegP must in fact be generated preverbally.

3.1.1.1. Typological Argument

Based on his (1979) study, Dahl argues that there is a universal tendency of languages to exhibit a preverbal negation. Grewendorf, however, argues against such a tendency, providing French facts. He shows that in Old French, ne is the only negation element, appearing in preverbal position. In Modern Literary French, a negation consists of two particles: ne assumed to be the head and pas presumably the specifier.\footnote{In Modern Colloquial French, the particle ne is generally lost. However, this is irrelevant for the discussion above.}

To support his analysis of postverbal negation, Grewendorf illustrates that the negation element in Old High German is preverbal as well. In Middle High German, the negation consists of two negative particles, en and niht, resembling Modern Literary French. However, in High German,
the preverbal negation particle, a proclitic, is lost. Following Lehmann (1978), who assumes that the relative placement of negation with respect to the verb depends on the word order type of the specific language, Grewendorf proposes generating the negation postverbally in SOV-languages and preverbally in SVO-languages. However, Grewendorf’s analysis is based on the problematic assumption that Indo-European languages are consistent SOV-languages, which they are not. German is generally assumed to have head-final as well as head-initial categories: I and V occur on the right periphery of IP and VP; CP, however, is not head-final. Thus, German serves as an example of an inconsistent Indo-European SOV-language.

Grewendorf further argues that there is no universal tendency of SOV languages to place Neg preverbally. However, Dryer (1988) interprets his own study to show that only a minority of SOV-languages (61 out of 136 or less than 45%) exhibit postverbal negation, i.e. SOVNeg word order. Grewendorf argues that this interpretation is incorrect since the study does not show the negation in its D-Structure position. However, Dahl (1979) and Dryer (1988) independently reach the conclusion that, among SOV languages, negatives tend to precede the verb. According to Dahl, whose study covers approximately 240 languages, there is a preference for uninflected negative particles to be placed preverbally: 84 languages place the negation preverbally, compared to 20 languages exhibiting postverbal placement of the negation. Dahl argues that the preverbal placement of Neg is particularly strong for SOV languages.

The preceding discussion thus reveals that neither study provides evidence for Grewendorf’s SOVNeg proposal.

3.1.1.2. Acquisition Argument

To support his postverbal analysis of German negation, Grewendorf refers to first language acquisition (L1) facts. Following Claessen (1988), he assumes that at some stage in their language development German children use the negator nicht postverbally. At that stage, it cannot be separated from the finite verb, illustrated by the following examples drawn from Claessen (1988):

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8 Note that under the assumption that an SOV word order indicates where the head is located, it is questionable how these facts are relevant for Grewendorf’s argument of postverbal nicht, unless he assumed German sentential negation to be the head of NegP. This, however, is not the case.
(18)  
(a)  hund geht nich
    dog  goes  not
(b)  mag nich kuche backe
    'I don’t want to bake a cake'

Under the assumption that children must be able to raise the verb into Agr$^0$ to realize V2 in main clauses, Grewendorf suggests that the verb passes through Neg$^0$ (where the negation element is affixed) while raising to C$^0$.9

However, Clahrsen’s (1987; 1988) studies of L1 acquisition of German negation show the following. German children have both positions of the negation element at their disposal, the preverbal as well as the postverbal one. While children at the beginning stage of the acquisition of negation almost exclusively use the negative nein ‘no’ preverbally as the sentential negator, they prefer the postverbal type of negation in Phase II (children up to 24 months). Clahrsen interprets these facts as follows. While learning the language, children take in both, preverbal and postverbal negation. The preverbal facts children interpret as [Neg+XP], resembling the correct structure of German. However, at this point in their development, they are not yet able to realize that “the postverbal negation is derived by raising an underlying preverbal negation...” (Clahrsen, 1988:14). Thus, the matrix clause data exhibiting postverbal negation do not pose a problem for a preverbal analysis since the main clause word order is derived by raising the verb through I$^0$ to C$^0$.10

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9 However, note that if nicht is analyzed as the specifier of NegP, which it is by Grewendorf, this assumption is problematic. Since the HMC only allows heads to move into head positions such as Neg$^0$, nicht is prohibited from moving into a head position.

10 Further support for a preverbal analysis of German negation comes from Dépréz and Pierce (1991). They account for preverbal negation such as the order [Neg (S) V$_{inf}$] as instances of failure to raise the subject out of VP and the verb to C$^0$. If this is the case, we expect postverbal position of the negator in matrix clauses [S V$_{fin}$ Neg] once subject and verb raising processes have been acquired. As the following examples, drawn from Clahrsen (1988) illustrate, this is the case, thus supporting a preverbal analysis of German negation:

(i) ich mach das gar nich putt
    'I don’t destroy this’

(ii) das kann jetzt nich mehr laufe
    ‘Now this can’t run anymore’
The acquisition facts presented by Clahsen (1988) suggest that the initial stage of negation is preverbal because children are not yet able to raise either the subject or the verb. If this is the case, NegP cannot be analyzed as postverbal: at that stage, movement processes are not yet available. This is the reason why, at later stages of their language development, children have a preference for postverbal negation: subject as well as verb raising processes have become available so that the SOVNeg word order in German matrix clauses is derived.

3.1.1.3. Historical Argument

Grewendorf argues that with respect to negation Jespersen’s cycle also holds for the German data. According to Jespersen (1917), the development of negation happens in a cycle, starting with the existence of only one negation particle, then developing a second particle and, finally, returning to a single one:

(19) dhazs ... siin fleisc ni chisah enigan unuuillun
    that his flesh not saw some decay
    ‘that his flesh didn’t see any decay’

(Isodor 719; cited in Grewendorf, 1990)

In the Old High German example above, negation is realized by a single negative particle. Although the particle precedes the verb, it is not attached to it. In Middle High German, negation contains a particle en, which immediately precedes the verb, and an optional niht:

(20) er enist niht guot
    he Neg-is not good

In (20) the en particle is a proclitic, i.e. a leftward clitic\(^{11}\) that is preverbally attached to the verb. Since the preverbal clitic is morphologically dependent on the verb, it seems reasonable to assume that en is the head. It follows that niht is the specifier. It appears to be the case that in Modern German the preverbal clitic en, the head of NegP, is lost. However, the specifier of NegP, Middle High niht, seems to have developed into Modern German nicht. As illustrated by (7) and (8), negation in Modern German is realized by a single negative element, indicating that Jespersen’s cycle also holds for the development of German negation. Grewendorf claims that SVO-languages such as supposedly Old and

\(^{11}\) Cliticization is generally interpreted as an instance of a head incorporating another head (cf. Baker, 1988).
Middle High German are consistent in that they exhibit preverbal negation, whereas SOV-languages such as Modern German show postverbal negation.

However, Paul (1966) argues that the word order shown in Middle High German is in fact SOV, like Modern German. If, however, the word order in Middle High German is the same as in Modern German and, furthermore, if the preverbal negation particle is obligatory, then Grewendorf would have to argue that dropping the clitic changes the status of *niht*, a specifier, from a non-head to a head. For an SOVNeg analysis, *nicht* would have to be reanalyzed as a head or as a rightward specifier. However, since there is no evidence for reanalysis, Grewendorf's SOVNeg analysis seems problematic.\(^\text{13}\)

Furthermore, if Grewendorf's analysis of SOVNeg is correct, then we should expect that the head follows the verb. In Middle High German, where both the head and the specifier of NegP are realized, that is not the case. On the contrary, the clitic head must be preverbally attached to the verb, which shows that Grewendorf's analysis of German negation as SOVNeg makes wrong predictions for Middle High German. Thus, analyzing German as SOVNeg appears problematic.

Having discussed Grewendorf's major arguments for an analysis of German as SOVNeg, concluding that they are problematic without exception, I argue that German sentential negation is realized in preverbal position. In the following section I will provide arguments for that analysis.

### 3.1.2. Locating NegP - A Revised Analysis

I propose that *nicht* is generated on the left periphery of NegP. However, the question of where NegP is located in the expanded structure of IP still needs to be addressed. To determine the position of a projection within IP, various methods have been proposed.

One possibility of determining the ordering of a functional category in IP is to check the surface order in which the morphemes occur. According to the Mirror Principle (Baker, 1985), it is expected that the ordering of the morphemes reveals the order in which they are attached in the syntax. Speas (1991) argues that bound morphemes do not always respect the

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\(^{12}\) Paul (1966) illustrates that, in Middle High German embedded clauses, the finite verb follows all other elements in the clause. The same holds for Modern German.

\(^{13}\) Note that in order to argue in favor of reanalysis, the question of what motivates the change of the syntactic status of the negation element would need to be addressed. Grewendorf, however, fails to do so.
Mirror Principle. However, as illustrated by Mitchell (1993), because of the Head Movement Constraint (HMC), free morphemes always reveal the relative ordering.

Another method to determine the ordering of the categories within IP is provided by the blocking facts that seem to be due to the HMC. Because this constraint blocks a syntactic head from skipping over another head in the case of head movement, any $X^0$ dominating another head $Y^0$ is expected to block the movement of the lower head. These facts help determine which head prevents another from raising: if one head blocks another head from raising, the blocking category must be higher in the syntactic structure.

To analyze the relative ordering of the phrases within IP, we will assume that if the maximal number of phrases is filled within IP, one is able to determine which phrases are higher than others:14

(21) Weil der Hund geliebt worden ist.
    because the dog loved passive is
    'Because the dog has been being loved'

Given that German is head-final, the relative ordering of the categories illustrates that ist 'is', carrying Tense and Agreement features, must be the element that is highest in the structure of IP. However, because ist as an irregular verb does not clearly reflect the morphological distinction between Tense and Agreement, let us consider the relative ordering of the morphemes of the verb kaufen 'buy'. In wir kauften 'we bought' kauf is the stem of the verb, -t- the past tense morpheme and -en the subject agreement marker indicating plural. This ordering strongly suggests that the functional category AgrP is higher in the structure than TP (cf. Ouhalla, 1990).

If the proposed analysis is correct, it is expected that neither the passive nor the main verb exhibit Tense or Agreement features when an auxiliary verb is present. The following examples show that this is the correct prediction:

(22) Weil ich geliebt worden war.
    because I loved passive was-1st sg. past
    Weil Du geliebt worden warst.
    because you loved passive were-2nd sg. past

14 For more argumentation on these facts, the reader is referred to Mitchell (1993).
Weil wir geliebt worden waren.
because we loved passive were-1st sg. past

As (22) illustrates, only the German perfective verb is inflected with Tense and subject Agreement; neither the passive worden nor the main verb geliebt exhibits inflectional features.

The analysis proposed predicts that worden can show Tense and Agreement marking only in those cases where the head in the passive form is not lexically realized:

(23) Weil ich geliebt wurde.
because I loved was -1st sg. pres.

Weil Du geliebt wurdest.
because you loved were-2nd sg. pres.

Weil wir geliebt wurden.
because we loved were-1st sg. pres.

As illustrated by (23), this prediction is correct; head movement of the passive is not blocked in the examples above. These facts support the analysis that the perfect auxiliary sein ‘be,’ if lexically realized, blocks the passive from being inflected with Tense and Agreement. It then follows that worden is lower in the syntactic structure than ist. Moreover, if the head is not lexically realized, the passive carries Tense and Agreement because no $X^0$ prevents the passive from raising. Thus, the following structure emerges:

(24) Weil der Hund geliebt worden ist.
because the dog loved passive is ‘because the dog is loved’
Having discussed the ordering of the functional categories in the expanded structure of IP, the question of where NegP is located arises. Recall that the German negator appears to be a leftward specifier of NegP. It turns out to be problematic to determine where NegP is in the syntactic structure, namely because the heads are on the right periphery and Neg$^0$ is empty. However, let us analyze what can be said about NegP. Consider the following:

(25) Weil ich die Katze nicht geliebt habe.  
    because I the cat not loved have  
    'because I haven't loved the cat'

The relative surface order of the phrases shows that the subject precedes the NP-object, which in turn precedes the negation element. Under the assumption that the NP-object is base-generated as a sister of the main verb (cf. e.g. Haegeman, 1991), (25) illustrates that it is not the case that German objects remain in their base-position throughout the derivation. On the contrary, if the object follows the negation, the result is constituent negation:
    'Because I don't love the cat but the dog'

In (26), the phrase [nicht die Katze] can be both fronted and conjoined
with an identical category, indicating that only the constituent is negated.
This shows that, although the negation element can occur in different
positions in the clause, the position for the sentential negation reading is
highly restricted in German.

3.2. Movement of German Constituents

If we wish to maintain that nicht is generated in NegP, then we must find
independent motivation for object movement out of VP. Following
Grewendorf (1990), I assume that the scrambling analysis proposed by
Webelhuth (1989) does not account for the obligatory nature of NP object
movement. Generally, scrambling is regarded as an optional movement
that is not motivated by independent syntactic processes.\(^{15}\) It is considered
adjunction to IP, i.e. movement to an A-bar position. Within the expanded
structure of IP, it is adjunction to the highest functional category except
CP.

3.2.1. Movement of NP Objects

According to Saito (1982), scrambling is optional in Japanese, a head-final
language like German. Saito illustrates that a variety of constituents can be
moved out of their base-position or scrambled. The same is true for
German. As the following examples illustrate, depending on emphasis,
adverbs and NP objects can be scrambled:

    because Tim it the child today not given has
    'because Tim hasn’t given it to the child today'

    because Tim today it the child not given has.

    because Tim the child it today not given has

However, according to native speakers’ intuitions, the order given in (27b,
c) is not the unmarked word order. Optional movement, i.e. scrambling
has taken place. In contrast to (27b) and (27c), the NP-object movement

\(^{15}\) Chomsky (1992) argues that all movement processes are triggered
obligatorily.
observed earlier is obligatory. Thus, it cannot be considered scrambling because if *nicht* precedes the object as in (26), the result is constituent negation.

However, obligatory movement processes must be independently motivated. Thus, possible reasons for such movement need to be discussed. Let us first compare those phrases that move obligatorily across NegP in German and phrases that do not. The following examples illustrate that NP objects always occur to the left, whereas PP objects (28-29) and predicate adjectives (30) always occur to the right of the negation element:

(28) Daß Kim die Flasche nicht auf den Tisch stellt.
that Kim the bottle not on the table put
‘that Kim doesn’t put the bottle on the table’

(29) Daß ihr Freund nicht nach Bremen kam.
that her friend not to Bremen came
‘that her friend didn’t come to Bremen’

(30) Weil ich nicht reich bin.
because I not rich am
‘because I’m not rich’

The different behavior of the negation element with respect to PPs leads to the question what the difference between the distribution of NP objects and PP objects is. It seems to be the case that those elements that occur to the right of *nicht*, predicate adjectives as well as PPs, have one syntactic property in common: in German, they do not need to be case-marked. Object NPs, however, are always case-marked:

(31) Weil Nicole das Buch nicht kaufen wollte.
because Nicole the book-acc not buy wanted

I propose, along with Santelmann (1991), that NP-objects move for Case reasons. A reason why there is obligatory movement of NP objects in German may be that the verb cannot case-assign the accusative object in its base-position: it moves in order to be case-marked and, thus, satisfy the Case Filter in a position higher in the syntactic structure. Without NP movement of objects, they would be caseless and, consequently, violate the Case Filter.\(^\text{17}\)

\(^\text{16}\) Following Chomsky (1992), Case is assigned in the spec-head relation.

\(^\text{17}\) Chomsky (1992) calls this process strong feature checking. In contrast
Following Chomsky (1991) and Santelmann (1991), I assume that there is a phrase above NegP to which NP objects move. Indicated by the fact that, for sentential negation, NP objects must occur to the left of the negation, this phrase must be higher than NegP. Based on French, a language in which subject as well as object agreement are visible, Chomsky (1991) proposes that there are two types of agreement between a verb and an NP: agreement with the subject and with the object.\textsuperscript{18} He refers to these functional categories as AgrS, subject agreement, and AgrO, object agreement. If AgrO is generated in a position higher than NegP, it provides a position to which NP objects move. Thus, AgrOP dominates NegP which in turn dominates VP. Recall that for sentential negation \textit{nicht} occurs close to the verb. Thus, it was concluded that NegP dominates VP. As I showed earlier, German verbs exhibit Tense morphology before subject Agreement morphology, leading us to conclude that AgrSP dominates TP. According to my analysis, the following structure emerges,\textsuperscript{19} matching up with Ouhalla's (1990) NEG parameter value (a):

to English, the V-features in French as well as in German force overt raising. Chomsky argues that "the morphological features of Tense and AGR have two functions: they check properties of the verb that raises to them, and they check properties of the Noun Phrase (DP) that raises to their specifier position; thus they assure that DP and V are properly paired" (41). If it happens to be the case that the features do not agree, the derivation crashes.

\textsuperscript{18} Chomsky (1991) notices that there have been basically two different accounts for the position of Agreement in the syntactic structure. Pollock (1989) provides evidence for ordering Agreement below Tense. However, there is also evidence for having Agreement dominate Tense, because verb-subject agreement suggests that there is a government relation between agreement and its subject. To adequately account for those facts, Chomsky argues that there are actually two types of Agreement.

\textsuperscript{19} This analysis is supported by Santelmann (1991).
At this point, the question how NP objects are case-assigned in [SpecAgrO] needs to be addressed. According to Chomsky (1991:436), "structural Case generally is correlated with agreement and reflects a government relation between the NP and the appropriate AGR elements." It follows that while Agreement between the verb and the subject is associated with nominative Case, Agreement between the verb and its object is associated with accusative Case, "determined by the relation of the NP to the AGR-O head of AGR-O-P" (Chomsky, 1991:436). Thus, I will assume that NP objects in German are Case-assigned under Spec-Head-Agreement in AgrO.

Chomsky (1992) argues that there is a difference between Case-assignment and feature checking. Under his analysis, Case is assigned by the verb. However, Case-assignment is not sufficient to generate a well-formed sentence: the features of the verb and the NP must be checked by Tense and Agreement to assure that the features match. Following Chomsky (1992), I assume that verbs as well as nouns "are drawn from the
lexicon with all of their morphological features...and these too must be checked in the appropriate position" (41).

Let us assume that NP object movement occurs in German obligatorily. However, because the negative element occupies [SpecNeg] and, presumably, does not move in the course of the derivation, movement of NP objects is visible only in the presence of nicht. In the absence of sentential negation, NP movement is string-vacuous.

3.2.2 Double Object Constructions

Since double object constructions seem to pose a problem to the analysis I propose, they will be discussed in this section. However, before discussing the structure of these constructions, let us consider the distribution facts.

In negative constructions with verbs which take an indirect object only, for sentential negation the dative object must be followed by the negation element,20 illustrated by (32a). Dative objects exhibit the same behavior as accusative objects: if the negation precedes the dative object, the result is constituent negation. Characteristic intonation facts as well as the possibility of adding a contrary rejoinder to the phrase in (33b) reveal that only the constituent is negated:

(33)  

a. Weil das Kind mir nicht antwortet.  
because the child me-dat not answers  
‘because the child doesn’t answer me’

b. Weil das Kind nicht mir antwortet, sondern  
because the child not me-dat answers but  
ihn.  
him-dat  
‘because the child doesn’t answer me but him’

In constructions with two objects, the negation element must follow both of them. Moreover, it must precede the verb to form a sentential negation. Thus, it is concluded that both objects are hierarchically higher than NegP:

(34) Weil Anabel Jürgen das Buch nicht gab.  
because Anabel Jürgen-dat the book-acc not gave  
‘because Anabel didn’t give the book to Jürgen’

As expected, if the negation element precedes either object, the result is

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20 For a detailed analysis of datives and free word order, the reader is referred to den Besten (1985).
constituent negation; nicht and the NP object can be fronted and conjoined with a category of the same type. Moreover, intonation facts and the possibility of adding a contrary rejoinder to the phrase indicate that the (35) and (36) are in fact constituent negations:

(35) Weil Anabel nicht Jürgen das Buch gab, sondern Ed. because Anabel not Jürgen the book gave but Ed

(36) Weil Anabel Jürgen nicht das Buch gab, sondern die because Anabel Jürgen not the book gave but the Zeitung.
paper

Because both objects occur to the left of the negation, it is concluded that they must move out of their base-position past the negation in order to be assigned Case. If the accusative object moves to [SpecAgrO] to be case-assigned, then the position is filled, which leads to the question of where and why the dative object moves. Under the assumption that dative objects also move, a possibility is that they really carry inherent Case, in contrast to accusative objects which presumably are assigned structural Case. Then, the dative object raises to an adjoined position to AgrO, while the accusative object is assumed to be in [SpecAgrO]. Under such an analysis, the features of the accusative object would be checked after moving to AgrO. If the features between the verb and its accusative object pair, the sentence is well-formed. Otherwise the derivation crashes.21

However, an analysis that adjoins the dative object to AgrO is problematic for two reasons: while one object carries accusative Case, the other is case-marked dative. I argued that movement of the accusative object to [SpecAgrO] is motivated by the fact that the verb cannot assign Case to the object in its base-position. Thus, it must move to AgrO to be assigned Case by Spec-Head-Agreement. The behavior of the dative object resembles that of the accusative object in that for sentential negation both must precede nicht. Then, it seems reasonable to assume that both objects move for the same reason, i.e. Case.

However, if this is the case, the question of how both objects move to AgrOP but show different Case-markings arises. One would be led to

21 Since Chomsky (1992) does not analyze double object constructions, I can only assume that by feature matching he means the features between the verb and the accusative object on the one hand, and the verb and the nominative subject on the other. The dative object, however, seems to be excluded from his analysis, presumably because English dative objects are assigned Case from prepositions.
assume that AgrO in fact assigns two different Cases. Thus, it must have (at least) two different Case-features at its disposal, and furthermore it must be able to assign different Cases within the same projection. Chomsky (1992) suggests that the same projection allows for different features. However, under his account, these features must be of different kinds, e.g. verb and noun features, both checked in AgrS. Since Case features are of the same kind, it seems unlikely that both are checked in AgrO.

The second major problem is to account for the question how adjunction to AgrO happens even if AgrOP itself is empty, i.e. if there is no accusative object present. (33a) illustrates that the dative object moves past the negation even in cases where no accusative object is present in the clause. Then the dative object would move into an adjoined position whose head, under an adjunction account, seems to have accusative and dative features at its disposal. However, only the dative case features would be picked up while the accusative features would be left stranded. Such an analysis seems problematic.

An alternative is to assume that what Chomsky calls AgrO is actually AgrO_{Acc}, since, in his analysis, that is the position to which accusative objects move for feature checking. I suggest that there are two different AgrO positions to which NP-objects move: one for accusative objects, AgrO_{Acc}, and one for dative objects, AgrO_{Dat}. Presumably, both objects receive structural Case because neither the accusative not the dative object can remain in its base-position in VP throughout the derivation. Thus, they raise in the syntactic structure. Under the assumption that movement must be motivated, I suggest that both objects move for feature checking purposes.

Following Chomsky (1992), I assume that the maximal projections AgrOP and AgrSP contain a collection of features, features that are common to subject and object agreement. In order for a sentence to be well-formed, the features of the head Agr^0 must match with the NP that raises into its specifier. Unless the features are compatible under the Spec-head relation, the derivation crashes. Thus, for example, if the subject

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22 Under Harbert and Toribio's (1993) analysis, this is not a problem. They assume that Case Theory refers to structural rather than morphological Case. Then, morphological Case-assignment takes place in VP. However, because structural Case cannot be licensed in VP, obligatory movement occurs.

23 If one followed Harbert and Toribio (1993), the dative object could move into the specifier position of AgrO because morphological Case is not assigned there but in VP.
raises to [SpecAgrO] instead of [SpecAgrS], the features of the head and its specifier do not match, which leads to ungrammaticality. With respect to the location in which the projections are generated, I assume the following. Since relative ordering facts reveal that the dative object as a full NP always precedes the accusative object, it follows that AgrO_{Dat} must dominate AgrO_{Acc}.24

Larson (1988) provides syntactic arguments for arguing that while the direct object carrying accusative Case originates in the specifier position of VP, the indirect object is analyzed as a complement of V^0. However, he assumes that Case is assigned within VP. Thus, it might be problematic to adopt his analysis of double object constructions. Since the purpose of this section is to address the question of whether AgrOP_{Dat} is higher than AgrOP_{Acc} in the syntactic structure, the question of where the two objects start out seems irrelevant to this discussion and is thus subject for further research.

In the preceding section, I illustrated that double object constructions cause problems for Chomsky’s AgrO analysis because the specifier position of AgrOP allows for one NP object only. I argued that both the dative and the accusative object move for Case reasons. Furthermore, I suggested a possible analysis proposing that there are actually two AgrO positions, one for the dative and one for the accusative object. However, in the future, not only this question needs to be worked out in greater detail but also the problem with the different ordering of pronouns mentioned in footnote 24.

4. Conclusion

In this chapter, I showed that the NegP hypothesis also holds for German. I illustrated that an analysis of German sentential negation as an adverb-like modifier fails to account for the data. Because of the facts of

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24 Note, however, that the word order changes with pronouns. Then, the accusative object must precede the dative object:

(i) Weil ich Ed das Buch gebe.
   because I Ed-dat the book-acc give

(ii) Weil ich es ihm gebe.
    because I it-acc him-dat give
    'because I give it to him'

(iii) *Daß ich ihm es gebe.
     that I him-dat it-acc give

Why this is the case, however, is subject to further research.
movement past the negation element, and, furthermore, historical facts of Middle High German, I concluded that *nicht* is the specifier of NegP. Analyzing *nicht* as the specifier, I argued for an analysis that generates it as the leftward specifier of NegP.

Having criticized Grewendorf’s analysis of German as SOVNeg problematic, I provided independent syntactic arguments for generating NegP as immediately dominating VP. In accordance with Ouhalla’s NEG parameter, German thus selects NEG parameter value (a). The surface order of the morphemes and the blocking facts reveal that AgrS dominates Tense, which in turn dominates AgrO. Furthermore, I provided syntactic evidence for arguing that AgrO is located above NegP.

It was then illustrated that NP objects must move in German. I argued that such movement cannot be analyzed as scrambling since movement of NP-objects is independently motivated by case reasons.

In the last section, I pointed out the problem posed by double object constructions. I proposed that there exists a separate AgrO projection for dative objects. However, this analysis needs to be worked out in greater detail in future research.
References


The Hierarchy of Negation and Tense in English

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1. Introduction

In May (1985) it was proposed that scopal ambiguities should be represented by means of a Quantifier Raising (QR) rule that would take place at LF. The result of this operation is that the NP with the widest scope c-commands the NP with the narrowest scope. Implicit was the conception that the mapping between syntactic structures and semantic representations should be direct. In concrete terms, the syntactic notion of c-command should correspond to the semantic notion of scope: if an element A has scope over an element B, then A has to c-command B at LF, understood as the syntactic level that mediates with semantic representations. Let us assume that this simple mapping applies generally and that a syntactic analysis that contradicts it should be rejected. The reason is clear: if it could be shown that this mapping is not tenable in all cases, we would have no reason to assume that May’s analysis is correct. I conclude that this is undesirable and that syntax and semantics should be related in a simple manner.

In the light of the preceding discussion, let us consider the respective scopes of Tense and Negation and how they interact. Example (1) could a priori have the two (simplified) semantic representations in (2):

(1) Fred did not run a marathon
(2) a. \( \neg P \) Fred run a marathon.
    b. \( P \neg \) Fred run a marathon.

According to (2b), (1) would be true if there were just one point in the past in which Peter was not running the marathon. This reading would always make (1) true. Clearly, what (1) means is that at no point in the past (or in a contextually specified time frame) did Fred run the marathon, which is the meaning represented in (2a) (see Chierchia and McConnell-Ginet 1990). Let me further elaborate with another example, this time with a

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1 I thank Wayne Harbert, Vicki Carstens and Chris Collins for comments and discussion on an early version of this paper. I also thank Ann O’Nymous for carefully reviewing it. Only I am responsible for any errors the reader will surely find.
time adverbial:

(3) Fred didn’t run a marathon on July 15, 1993.

At first sight, it looks as if this sentence contradicts what I said with respect to (1). It could be argued that this sentence is true if at a certain point in the past (July 15, 1993) Fred didn’t run a marathon, i.e., with Tense taking scope over Negation. However, the time adverbial is not a point in time. The time adverbial gives us a time frame within which to compute the truth values of the sentence. This means that (3) is true if there is no point within the time frame given in which Fred ran the marathon, that is, if we cannot pick a point in 7/15/93 in which Fred was running the marathon. I conclude that Negation always takes scope over Tense.

The interaction of tense and negation in simple sentences like (1) and (3) shows that negation must take scope over tense, as is represented in (2a). Therefore, according to the logic of May’s analysis, negation should asymmetrically c-command tense. However, the linear order of the morphemes seems to indicate the opposite. The syntactic structure that (1) suggests is the one in (4):

(4) Fred [TP did [NegP not [VP run the marathon]]]

There seems to be a tension between syntax and semantics, an instance in which one cannot easily be mapped to the other. This tension could be solved in two different ways: (i) base generate NegP in a position dominating TP or (ii) base generate NegP in a lower position and apply QR. In this paper I show that both are necessary for a full account of the data. Sentential Negation (SNeg) is defined as an abstract functional head that c-commands TP; not, which can take any lexical head as complement, is constituent negation (CNeg) and can optionally take sentential scope by means of a raising rule. This raising will be shown to be constrained by Relativized Minimality.

To my knowledge, there have been two proposals that generate sentential negation in English at a position lower than tense. I am referring to Ouhalla (1989) and Laka (1990). According to Ouhalla, negation should be generated below Aux(iliary) Phrase, as in (5a); Laka instead suggests that it should be generated between Tense Phrase and some Aspect Phrase, as in (5b). Let us call both AuxP and AspectP AP, to simplify matters irrelevant to our discussion:

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2 This tension has independently been noticed by Sportiche (1993).
Neither Ouhalla nor Laka try to explain how their respective structures would map onto the semantics, arguing only on the basis of syntactic evidence. In the remainder of this paper, I will argue for a syntactic structure in which NegP dominates TP. I will show that (i) Ouhalla’s structure (5a) is only half right, (ii) the evidence that Laka presents for (5b) dissolves if we assume an AgrSP in our syntactic structure, (iii) I will present a way in which the linear order in (4) can be reinterpreted without harming the basic tenet that Neg has to asymmetrically c-command Tense at LF.

As a theoretical framework, I assume the already quite standard Head Movement Constraint (HMC) (Travis 1984, Rizzi 1990) subsumed in the “Shortest Move” Economy Principle in Chomsky (1992), and the NEG criterion, as in Haegeman and Zanuttini (1991), according to which a NEG head must check features by LF with an operator in [Spec, Neg] (or, more generally, in the checking domain of Neg, using the notion of checking domain as in Chomsky 1992).

The rest of the paper is organized as follows: in sections 2 and 3 I review Ouhalla’s and Laka’s analyses, in sections 4 and 5 I present my own. In section 6 I present some general conclusions with an eye toward Universal Grammar.

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3 Laka (pp. 80-83) argues that the semantic representation of a negative clause is such that Tense has scope over Negation. Her point is that elements under the scope of negation may be focalized and get a contrastive focus reading (see Jackendoff 1972), but the same is not possible with Tense:

(i) Mary didn’t BUY a book yesterday, she STOLE it.
(ii) Mary DIDn’t leave.

where (ii) would mean “it is not in the past that Mary leaves”. However, the same thing happens with any other auxiliary: in (iii), (iv) and (v) you cannot assign a contrastive focus reading to the aspect, progressive and passive auxiliaries:

(iii) Mary HASn’t bought a book.
(iv) Mary ISn’t buying a book.
(v) The book ISn’t bought (by Mary).

It seems that the reason why Tense cannot get a contrastive focus is not related to scope.

Ouhalla argues for a phrase structure like the one depicted in (5a). Additionally, he assumes that there is no parametric variation with respect to verb movement: all languages raise their verbs to T at S-Structure.

Ouhalla manages to account for much English data in quite an elegant manner. Consider the sentences in (6):

(6) a. *John likes not Bill.
b. *John not likes Bill.
c. *John not has lost his mind.
d. John has not lost his mind
e. John doesn’t like Bill.

In Ouhalla’s framework, the above sentences have a simple account. In (6a) the verb has raised above not, violating the HMC. (6b) is ruled out because there is no affix lowering but overt V raising to T. (6c) is ruled out because not should be generated below the auxiliary, in contrast to (6d). In (6e), since the verb cannot raise to T above the head not, do is inserted as a last resort device to rescue the derivation. However, his theory is not without problems:

(7) a. John could not have arrived so late.
b. *John ate quickly the cake.

The fact is that though in (6c) not cannot show up before the auxiliary, in (7a) it can, i.e., when there is a modal. We need an analysis of negation in English that rules out (6c) and allows for (7a). (7b) is a different problem: if the English verb raises to T, how come there cannot be any adverbs between the verb and the direct object?

The conclusion is that though Ouhalla’s analysis cannot account for all the data, it nonetheless offers solutions to some puzzles of the English grammar that an alternative account should also be able to explain.


Laka proposes that the structure of the clause in English is as in (5a), repeated here as (8a) for the reader’s convenience. On the other hand, Basque and Spanish have a different structure, represented in (8b):

(8) a. [TP [NegP [AP [VP ]]]]
b. [NegP [TP [AP [VP ]]]]

4 This overview owes much to a class discussion by Chris Collins.
Laka uses two types of evidence for this structure: Verb Phrase Deletion (VPD) and Negative Polarity Item (NPI) licensing. Her analysis is
crosslinguistic: she wants to show that if we adopt (8a) for English and
(8b) for Basque and Spanish then we can account for the essential facts of
negation in all three languages.

However, as I will show, if we adopt the standard assumption that
there is an AgrsP that dominates both TP and NegP, Laka’s argumentation
simply dissolves (on AgrS as being the highest node in the clause, see
Belletti (1990), Chomsky (1991, 1992), among many others). I will discuss
VPD in 3.1 and NPI licensing in 3.2.5

3.1 VPD

Assuming that discontinuous chunks cannot be deleted, it follows from
the different structures proposed by Laka that in Basque and Spanish the
whole TP can be deleted leaving Neg overt, whereas in English, if Neg is
overt, Tense cannot be deleted. According to Laka, (9) bears this
prediction out:

(9) a. Marik liburua erosi du eta Peruk ez [e]
    Mary book bought has but Peter not.

b. María ha comprado un libro pero Pedro no [e].

c. Mary has bought a book but Peter has not [e].

In Basque and Spanish, the auxiliary in T would be in the deleted
constituent. For (9c), Laka claims that have is raised out of its base
generated position into T, which explains why it is not deleted. This Aux
raising violates the HMC if not is a head, which Laka does not explicitly
assume. But, since not triggers do-support, it seems that it should be

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5 In this paper I assume the standard inventory of functional categories:
AgrPs, NegP, TP. Of course, this is not the only possibility. Branigan
(1992) argues for a IIP that dominates AgrsP and to which subjects can be
raised. The following structure could be proposed:

(i) IIP > NegP > AgrsP > TP > ... > VP

My analyses in sections 3 and 4 would not change radically, except that I
could assume that Spanish verbs raise to AgrS and English auxiliaries to Π.
i would have an additional advantage: in López (1992) I remarked that if
AgrsP is higher than NegP, then a subject NPI would have to move to
[Spec SNeg] first, and then to [Spec AgrS], which is an instance of
improper movement. See also Zanuttini (1991), where she argues that
SNeg should be generated above AgrsP.
considered a head, as in Ouhalla (1990).

In English the same output to VPD can be obtained if TP is generated below NegP and AgrP is generated above NegP. The auxiliary would raise into AgrS, a higher position, therefore it would not go away in a VPD context:

\[\text{[AgrSP hasn't [NegP t [TP t [AP t ]]]]}\]

I propose that (10) is the correct analysis for -n't, but not for not, which in section 3 will be shown to be generated at a lower position as constituent negation.

Now, what I have to explain is why in Basque or Spanish VPD deletes the auxiliary too. Since I am not in a position to talk about Basque, I will limit my discussion to Spanish. I believe that the reason why the Spanish auxiliary is deleted together with the verb is because the Spanish auxiliary only raises to Tense, whereas in English it goes all the way up to AgrS. I provide two related arguments to show that Spanish auxiliaries (and what I say extends to main verbs) can only raise to Tense. NPI licensing under the NEG criterion is crucial to my analysis.

First, consider (11):

\[\text{(11) Javier nunca había comprado un libro en su vida.}\]
\[\text{Javier never had bought a book in his life.}\]

According to the NEG criterion, nunca, an NPI, has to move to [Spec, Neg] to check its features with the head NEG. If the verb were in AgrS, nunca would have to be adjoined to AgrS' (though adjunction to X' is considered problematic these days); therefore, in order for nunca to go to [Spec, Neg], it would have to lower, in violation of the ECP:

\[\text{[AgrSP *t ha [NegP nunca t [TP t [AP t ]]]]}\]

The possibility that nunca be generated in a lower position, raised into [Spec, Neg], and subsequently raised again into pre-Aux position should be rejected for lack of motivation for this last move.

On the other hand, if the verb remains in Tense nunca can be adjoined to TP or be directly generated in [Spec, Neg].

---

6 Some English speakers accept (i):

\[\text{(i) Sam never could make up his mind.}\]
Secondly, it is a well known fact about Spanish NPIs that they need to be licensed by the head no when they appear in postverbal position, whereas preverbal NPIs cannot co-occur with no (on no being the head of SNeg, see Suñer 1992, for the similar Italian non, see Belletti 1990):

(13) a. Yo no vi nunca a Pedro en Barcelona.

b. Yo nunca vi a Pedro en Barcelona.

I never saw Peter in Barcelona.

This can be accounted for in the following way. Spanish SNeg can optionally generate a phonetically null head that projects a spec with strong features (in the sense of Chomsky 1992): if [e]SNeg0 is generated, NPIs have to raise to [Spec, SNeg] overtly, and that is how we obtain the NPI + Verb order (see López 1994, for a similar explanation). Now, consider the sentences in (14):

(14) a. Yo no había nunca visto a Pedro tan contento.

b. *Yo había nunca visto a Pedro tan contento.

c. Yo nunca había visto a Pedro tan contento.

‘I never had seen Peter so happy.’

If the auxiliary were in AgrS then nunca could be in [Spec, SNeg], it would check the strong features of the spec of [e]SNeg0, and there would not be any reason why (14b) is ungrammatical. On the other hand, if the auxiliary is in T, then nunca cannot be in [Spec, SNeg] overtly, therefore the strong features of [e]SNeg0 go to PF unchecked and the derivation crashes: it follows that (14b) should be ungrammatical and (14c) grammatical. I conclude that there are good reasons to assume that the Spanish auxiliary or main verb only raises to T overtly.

3.2 NPI licensing

Laka assumes Klima’s (1964) proposal that NPIs are licensed under c-command by a negative word, and argues that in Basque the subject in [Spec, T] is c-commanded by Neg, which accounts for the availability of subject NPIs. In English there are no subject NPIs because subjects in [Spec, T] are not c-commanded by the negative word:

(15) *[TP anybody did [NegP not come late]]

However, as I will argue below, negative quantifiers in English are not licensed in [spec Neg], so, if (i) is grammatical in English, it is not properly speaking a counterexample to my analysis.
But, again, the same result can be obtained if there is an AgrSP that dominates both NegP and TP:

(16) $^[\text{AgrSP} \text{ anybody did } [\text{NegP not } [\text{TP come late }]]]$

On the other hand, two Basque speakers consider (17) perfectly grammatical, which would suggest that subject NPIs do not need to be c-commanded by Neg, but rather, they have to be in a Spec-head configuration:

(17) Iork ez dio Iboni etxea eman.
     Anybody not has Ibon-to house given.
     ‘Nobody has given the house to Ibon.’

I suggest that (17) might be evidence in favor of the NEG criterion but, as I said above, I am not in a position to offer an analysis of Basque.

Let us try to account for the ungrammaticality of subject NPIs in English in the NEG criterion proposal, in conjunction with the feature checking theory of Chomsky (1992). English NPIs cannot raise to [Spec, Neg] overtly:

(18) I did not see anybody.
     $^*$I did anybody not see.

I will assume that (18) shows evidence that the NEG features in [Spec, SNeg] are weak and do not license a spec position in the overt syntax. However, [Spec, AgrS] does force overt movement of the subject. If the subject is an NPI, it has to lower at LF to check its negative features, but this is an ECP violation:

(19) $^[\text{AgrS} \ ^*t \text{ did } [\text{NegP anybody not } [\text{TP come}]]]$

In conclusion, we can derive the impossibility of subject NPIs in English without resorting to hierarchical variation. Notice that this analysis predicts that for any language if the features of spec AgrS are strong and those of [Spec, SNeg] are weak, subject NPIs are not licensed. I leave for future research the (dis)confirmation of such a prediction.

Subject NPIs are grammatical in Spanish as they are in Basque. As any other NPI, a subject NPI is licensed by the head no if it is in post-verbal position:
But recall that the Spanish verb only moves to Tense: therefore we can plausibly argue that *nadie* sits in \([\text{Spec, Neg}]\) in (19b), as in the analysis sketched above for Spanish NPIs in general, therefore fulfilling the overt checking requirement of \([e]_{\text{SNeg}}^0\).

My analysis of *anybody* should predict that if *nobody* were also an NPI, then 'nobody came late' should be ungrammatical as well. However, it is generally assumed that negative words like *nobody, never, nothing*, are not NPIs, i.e., are not licensed by an (invisible) NEG head. Notice that if Neg co-occurs with any of them, the meaning of the sentence changes (in Standard English):

(21) Peter did not say nothing.

(21) actually means that Peter said something, which suggests that the negation in *nothing* and sentential negation are two independent negative items. If *nothing* checked its features in \([\text{Spec, SNeg}]\), we would expect (21) to mean the same as 'Peter did not say anything'.

Let me summarize my conclusions in section 3. I have shown that the differences between Spanish and English with respect to the properties of negation can be derived as a consequence of the different extent of Verb Movement instead of invoking different hierarchies of functional categories, as in Laka (1990). This seems to me to be a desirable conclusion on principled grounds: allowing for the hierarchy of functional categories to vary arbitrarily from language to language deprives the theory of any notion of Universal Base, making it difficult to define a Universal Grammar. Instead, I believe we should work towards a fixed Universal Base and account for surface variation in terms of the properties of the functional nodes. In the remainder of this paper, I will assume that this is the right strategy (see López 1992, 1994).

Arguing for shorter auxiliary raising in Spanish than in English raises a difficult issue: what is in English Agr that attracts auxiliaries (but not verbs) overtly and what is in Spanish Agr that does not do so? It seems that the properties of functional categories have no visible reflex on the morphology of the lexical items: a very rich agreement morphology projects a "weak" (in the sense of Chomsky 1992) Agr\(^0\) in Spanish, whereas the impoverished verbal agreement of English projects a "strong" head Agr\(^0\). At this point, I do not know why this should be so.
4. **Analysis**

In the previous sections I showed that Ouhalla’s and Laka’s evidence for the claim that TP dominates NegP can be plausibly explained by other means. Now, assuming the hypothesis that NegP dominates TP, I have to account for the linear order.

English negation can show up in two different shapes: as the contracted -n’t or as the full form not. I am going to assume that both -n’t and not are heads, since both trigger do-support. These two heads behave differently though. -n’t seems to be really cliticized to the auxiliary, and it raises with it when asking a negative question:

(22) a. Couldn’t you give me that book?
    b. *Could you not give me that book?

I suggest that (22a) should be analyzed as in (23): the modal in T adjoins to the SNeg head, the complex head [sNeg SNeg T], raises into AgrS and finally the head [AgrS AgrS SNeg] lands in C.

(23) \([CP \text{ couldn’t } [AgrSP you t [NegP t [TP t \text{ give me the book}]]]]\)

Also, while -n’t invariably attaches to the highest verbal head of the clause as in (23), not can show up in a number of places, as in (25):

(24) a. He couldn’t have been fooling around so much.
    b. *He could haven’t been fooling around so much.

(25) a. He could not have been fooling around so much.
    b. He could have not been fooling around so much.
    c. He could have be not fooling around so much.

Moreover, not, unlike -n’t, does not need to show up in the verbal phrase. It also co-occurs with a variety of other phrases.

(26) a. Not me.
    b. Not in my apartment.
    c. Not too well.

Finally, in (27) we can see that -n’t and not can co-occur, suggesting that they are generated in different positions. Two nots are allowed in the same sentence, but not two -n’ts:

(27) He couldn’t have not been fooling around so much.
(27)  
a. He couldn’t not do his homework.  
b. He could not have not done his homework.  
c. *He couldn’t haven’t done his homework.

We have therefore to acknowledge that -n’t and not are different items and are generated in different positions of the tree structure. The following is my analysis of English negation:

1. SNeg is a functional head that is immediately dominated by AgrSP and that immediately dominates TP. As a functional category, it only contains features that must be checked (following the suggestions in Chomsky 1992).

2. Tentatively, I propose that -n’t is generated as a clitic to the auxiliary or modal head, which has to be considered a lexical head (but see (34) and ensuing discussion). Aux raises to Tense, and Tense raises to SNeg, where -n’t can check its features against SNeg. The head SNeg can then move forward to AgrS:

\[
\begin{align*}
\text{Agr}_S^0 & \quad \text{SNeg}_k & \quad \text{SNegP} \\
\text{Agr}_S & \quad \text{SNeg} & \quad \text{TP} \\
\text{SNeg} & \quad \text{TP} & \quad \text{AuxP} \\
\text{T} & \quad \text{Aux}_i & \quad \text{t}_j \\
\text{hasn't} & \quad \text{t}_k & \quad \text{t}_i \\
\end{align*}
\]

3. not is not sentential negation (i.e., the head that selects for TP) but
constituent negation (i.e., a head that selects for other categories\(^7\)). CNeg can optionally take sentential scope in the manner that will be specified in section 5. As for its internal structure, I will assume that SNeg and CNeg are identical: both project a phrase that contains an operator in specifier position. In (30) I show that constituent negation can license NPIs, which under the NEG criterion, means that there has to be a Spec-head relation:

(30) He has probably not seen anybody.

4. The complementary distribution of \(-n't\) and \(not\) is forced by a UG constraint: if \(not\) were generated in SNeg, then auxiliary raising into AgrS would violate the HMC. This gives an interesting prediction: if SNeg is universally generated between AgrS and TP, then it has to always be an abstract head checked by a verbal affix or clitic. As far as I know, that seems to be the case: French \(ne\) has been analyzed by Pollock (1989) as a clitic picked up by the verb as it raises to AgrS. Also, there is evidence that Spanish \(no\) is a clitic on the verb. In (31a,b) we can see that only other clitics can stand between \(no\) and the verb. In (31c) we can see that it goes along with the verb when it raises over the subject to C in \(wh\)-questions. No adverb can stand between the verb and the \(wh\)-word (31d) (Uribe-Echevarría, 1990), but \(no\) can (31c):\(^8\)

\(^7\) An interesting issue is what kind of categories \(not\) can select. It seems that it selects for DP rather than NP: compare (i) and (ii):

(i) not the apartment.
(ii) *the not apartment.

If we agree that there is functional structure in PPs, APs and subjunctive bare verbs then it should be the case that \(not\) selects for functional categories only:

(iii) not right in the middle of the road.
(iv) he is probably not very tall.
(v) I suggest that you not come.


\(^8\) Spanish SNeg \(no\) is homophonous with anaphoric negation:

(i) Viste a Pedro?
    'Did you see Peter?'
(31)  a.  Probablemente no lo vi.
     Probably not it saw-I.
     'I probably didn’t see it.'

b.  *No probablemente lo vi.
     Not probably it saw-I

c.  ¿A quién no vio Pedro en Barcelona?
     Whom not saw Peter in Barcelona.
     'Whom didn’t Peter see in Barcelona?'

d.  *¿A quién a veces vio Pedro en Barcelona?
     Whom sometimes saw Peter in Barcelona

Acknowledging the existence of (at least) two NegPs in the clause allows for a very natural account of Ouhalla’s data, repeated here as (32) and (33) for the reader’s convenience:

(32)  a.  *John likes not Bill.
       b.  *John not likes Bill.
       c.  *John not has lost his mind.
       d.  John has not lost his mind
       e.  John doesn’t like Bill.

(33)  a.  John could not have arrived so late.
       b.  *John ate quickly the cake.

(32a) and (32b) are standard violations of the HMC (in the case of (32b) because of LF verb raising, as in Chomsky 1992). (32c) is ungrammatical because the auxiliary has to raise to AgrS in the overt syntax, so it can only show up to the left of not. (32d) is a case of constituent negation. My suggestion for (33a) is that auxiliaries are among the class of items that can be selected by constituent negation in English: notice that assuming that there exist (at least) two negation heads in the same sentence is the only way to get over the tension between (32c) and (33a), that Ouhalla’s analysis could not solve. (33b) is not a problem for the present analysis because I do not assume overt raising of the main verb in English.

The reader probably noticed that I left out (32e) from the previous paragraph. An account for (32e) has to include an explanation of why (34) is ungrammatical:

    No, no lo vi.
    'No, I didn’t see him.'

Only SNeg behaves like a clitic.
(34) *John eatsn’t too many potatoes.

My analysis so far predicts that (34) should be grammatical: the verb would be generated with all the affixes and clitics and LF raising would check all their features.\(^9\)

In order to tackle this problem, I suggest making a distinction between affixes and clitics. The first are generated with a lexical head, whereas the second are generated under a functional node and are picked up by a lexical head when it raises—as in the pre-minimalist analyses of head raising. Then, we can assume that clitics cannot enter the PF level without attaching to some lexical head by spell-out: the need of -n’t to attach to a lexical head would force do-support and would rule out (34). This type of solution could also explain the peculiar morpheme order verb-tense-subject agreement-negation in English, which would suggest that SNegP is generated higher than AgrSP, if we assume the Mirror Principle (Baker 1988). Under my account, Tense and Agr are generated with the auxiliary, whereas -n’t is picked up in the way. (35) represents the English base of a negative sentence, before auxiliary raising has taken place:

(35)

\[
\begin{array}{c}
\text{AgrSP} \\
[\Phi] \\
\text{SNegP} \\
\text{n't} \\
\text{TP} \\
[\text{tpast}] \\
\text{AuxP} \\
\text{has}
\end{array}
\]

5. **Constituent Negation and Scope**

In the previous section I concluded that all instances of *not* are generated as constituent negation, i.e., taking lower constituents as complement. However, this raises the issue of the respective scopes of negation and tense with which I started this paper.

Before I start the discussion, I want to make an additional assumption: scope is defined by operators in spec or adjoined positions, but not by heads. The reason is that, since verb or auxiliary raising picks up all the clausal heads until the highest node, they all c-command one another at LF, scope being as a consequence not discernible.

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\(^9\) This problem is not mentioned in Chomsky (1992).
5.1 Operator Raising

Consider again a simple example of a negative sentence in English:

(36) I could not go to that party.
    =I was not able to go.
    =I was able not to go.

This sentence is ambiguous: not can take scope over the modal verb or it can take scope inside the modal. This ambiguity is made more clear by the tags that can follow it:10

(37) I could not go to the party, could I?
    I could not go to the party, couldn’t I?

On the other hand, -n’t, the real sentential negation, does not have this ambiguity: the operator that -n’t governs must take scope over the modal.

(38) a. I couldn’t go to the party.
    =I wasn’t able to go.
    ≠I was able not to go.

    b. *I couldn’t go to the party, couldn’t I?

Now the question is how to make the constituent negation in (36) have sentential scope.

My explanation goes along the following lines: assume that SNegP can act as a functional checking phrase for the lexical CNeg (as proposed by Núñez del Prado and Gair 1993). If that is the case, an Op in [Spec, CNeg] should raise by LF to [Spec, SNeg] in order to check features, obtaining the scopal effect of sentential negation, as represented in (39):

10 The relevance of the tag test was suggested to me by D. Sportiche.
Since the features of SNeg and CNeg agree, we do not get the effect of negating twice, as in (40):

(40) I couldn’t not go to that damn party.

In (40), both constituent and sentential negation have features independent of one another, so there are two negations in the sentence. Finally, I further suggest that when CNeg has narrow scope, the the Op checks features in some lower negative functional category (which, pending further research, I leave unexplored).

As independent evidence for operator raising, notice in (41) that when an adverb c-commands CNeg, you cannot get a sentential negation scope, and the sentence is left as a positive declarative:

(41) I could simply not go
     =I was able to not go.
     ≠I wasn’t able to go.

The operator in the lower NegP cannot raise to the upper one to get sentential scope because the intervening adverb is an A' position, and since operators sit in A' positions, the adverb acts as a Relativized Minimality barrier.

5.2 Head Raising

A plausible alternative to my analysis in 5.1 would simply QR the Op and

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11 I offer this evidence as tentative, since some of my English informants perceive (41) as ambiguous.
adjoin it to some higher category, say AgrSP, obtaining the scope effects without positing an abstract SNegP. However, I believe there is evidence that the head CNeg also raises to SNeg. If it is true that both Op and the head CNeg raise, then raising motivated by feature checking imposes itself as the best account. Notice that, though (42) is ambiguous between the constituent and the sentential readings, (43) can only have the constituent reading:

(42) I could not see the book.
(43) I could have not seen the book.

The difference between (42) and (43) can be accounted for if we assume that (i) CNeg$^0$ has to raise to SNeg$^0$ when it has sentential scope (ii) have is a head that prevents the raising of not as predicted by Shortest Movement (HMC), (iii) not in (42) can adjoin to the traces left behind by the modal as it raises to AgrS$^0$ and adjoin to SNeg$^0$, without violating Shortest Movement.

Finally, consider the surprising contrast in (44):

(44) a. Peter could have seen the book in the bookshop, but Susan could not [e].
   b. *Peter could have seen the book in the bookshop, but Susan could have not [e].

This contrast was noticed in López (1992, and subsequent work), and it was proposed that whereas sentential negation (the head that immediately dominates the verbal projection system) can license VPD, constituent negation cannot do so. Since here I have argued that not is generated as CNeg, my earlier position has to be minimally refined: assuming that VPD is licensed at LF (if that is the sense of the Copy Rule in Williams 1977, see also Kitagawa 1991), then only those negative heads that can raise to SNeg at LF will be able to license VPD—notice that the negation in (45a) cannot be interpreted as a constituent negator, giving extra force to my proposal.

5.3 Evidence for Neg Raising

NPI licensing provides evidence for the proposal outlined in 5.1 and 5.2. Some NPIs defy both Klima’s (1964) and Haegeman and Zanuttini’s (1991) theories of NPI licensing because they are not in a [Spec, Head] relation with or c-commanded by the negative head that is supposed to license them (thanks to Wayne Harbert for pointing this fact out to me and for fruitful discussion):
(45)  a. Not a person said anything.
     b. I said not a word to anyone.

On the other hand, this ability of non c-commanding negative words to license NPIs is not unconstrained. In this respect, consider the examples in (46):

(46)  a. I will negotiate at no time with any imbecile.
     b. He spoke in none of the cities he visited with any dissenter.
     c. *I talked with no enthusiasm about anything.

Consider also (47) (from Barss and Lasnik 1986):

(47)  a. *I said anything to not a person.
     b. I said not a word to anybody.

I have to explain why in (47a) it is not possible for the CNeg to raise to SNeg and from that position license the NPI.

In order to start making sense out of this puzzle, let us take a closer look at (45b). (48) is ambiguous between a constituent or a sentential reading, as is to be expected of my analysis:

(48)   I said not a word.

That is, (48) can mean that I didn’t speak at all or that I said something but it was not a word. (49a,b) will help disambiguate:

(49)  a. I said not a word: I remained mute.
     b. I said not a word but a whole list of reasons and complaints.

However, in (50) we can see that only the first continuation is compatible with the NPI:

(50)  a. I said not a word to anyone: I remained mute.
     b. *I said not a word to anyone but a whole list of reasons and complaints.

What (50) is telling us is that not has to be interpreted as sentential negation in order to be able to license an NPI. In the terms of my analysis, this means that not raises to SNeg⁰ at LF and fills it with features. The NPI can then raise to [Spec, SNeg], where it can c-command, therefore bind, its own trace. On the other hand, when not does not raise, SNeg has no features with which to license the NPI. Not has then a constituent negation
reading and it cannot license an NPI because, if the NPI raises to [Spec, CNeg], it cannot c-command and bind its trace.

This data provides further evidence that the operator raises to [Spec, SNeg] rather than adjoining to some other category, say AgrP. Under the adjunction analysis the operator in [Spec, CNeg] could adjoin to [Spec, AGRO] below Tense, license the NPI and still maintain a constituent scope, as shown in (52):

$$\text{(51)} \quad [\text{AgrSP} \mid TP \mid \text{AgrOP} \mid \text{AgrOP} \ldots [t \text{ not a word}] \mid \text{to anyone}]]]$$

The ungrammaticality of (50b) shows that it is not possible for a constituent negator that does not c-command an NPI to license the NPI retaining the constituent scope, which leads to the conclusion that (51) is not a viable alternative. As an aside, notice that it is not crucial for a CNeg to raise to SNeg in order to license an NPI. If a CNeg is generated in a position such that the spec c-commands the NPI, the NPI can be licensed even if CNeg cannot raise to SNeg without violating the HMC:

$$\text{(52)} \quad \text{Peter could have been not seeing anybody.}$$

Now, let us take a look at (46). I have to explain why (46a,b) are grammatical whereas (46c) is ungrammatical. The reason is again LF movement: (46c) is an adjunct island (as in Huang 1982). In order for the constituent negator to license the NPI, it has to raise to SNeg, but the manner adverbial acts as a barrier between the moved element and its trace, rendering the derivation ungrammatical. No such problem arises in (46a,b): as Huang (1982) explains, temporal and place adverbials behave as arguments with respect to island effects.

Finally, (47) also has to be accounted for. According to what I have said, it should be possible in (47a) for not in the dative PP to raise to SNeg and license the NPI in the accusative NP. I assume that this is not possible due to a superiority effect, similar to what we find in the CP domain, as in (53)—and here, I subscribe to the reader's favorite analysis of superiority effects.

$$\text{(53)} \quad \text{a. } *\text{To whom did you give what?}$$
$$\quad \text{b. } \text{What did you give to whom?}$$

This is not the only filter that affects both CP and NegP: as Núñez del Prado (p.c.) points out, the ungrammaticality of Spanish (54a) should be related to the doubly filled COMP filter, as in (54b):

$$\text{(54)} \quad \text{a. } *\text{To whom did you give what?}$$
$$\quad \text{b. } \text{What did you give to whom?}$$
(54)  a.  *Nadie no vino a la fiesta.
   Nobody not came to the party.

   b.  *¿Quién que vino a la fiesta?
   Who that came to the party.

It is not surprising that the CP and the NegP domain are subject to similar constraints. Pending more study in this area, it seems to me to be a plausible hypothesis that CP and NegP have essentially identical properties.\footnote{12, 13}

6. Conclusions

In this paper, I have developed a full account of the hierarchical position of English negation. My analysis requires: (i) a SNegP dominating TP, (ii) a CNeg that selects for potentially any phrase, (iii) Operator and head raising of CNeg when it takes sentential scope. I believe that (i)-(iii) are fully motivated by the evidence provided.

Moreover, I believe that this analysis opens the door for a universal characterization of the syntax of negation. Ouhalla (1990), Rivero (1991), and Takahashi and Whitman (1994) have shown that in languages as distant as Turkish, Japanese, or Czech, the negative heads seem to be generated at positions lower than Tense. I suggest that these languages also have a SNegP above TP that allows their relatively low CNegs to raise and take scope over TP, thus obtaining the sentential negation reading. With such an analysis we would take a step toward a highly desirable objective: a universal hierarchy of functional categories.

One final consideration: Núñez del Prado and Gair (1993, this volume) have already put forward an analysis of sentential negation in Bengali that crucially relies on raising of a relatively low NegP into a higher NegP that dominates TP. The fact that our entirely different data bases have converged into similar analyses cannot be, in my opinion, the product of chance.

\footnote{12 This I believe is the spirit of Rizzi's (1991) parallel \textit{wh-} criterion/NEG criterion. This idea is also expressed in Sportiche (1993).}

\footnote{13 As is customary, I leave a serious problem for a footnote. As Collins (p.c.) points out, this raising analysis could overgeneralize if the NEG operator moved successive-cyclically to higher clauses. I therefore stipulate that NEG raising is clause bound.}
References


On the Position of NegP in English
and the Status of Not

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Pollock (1989) proposed that sentential negation may best be treated as projecting its own functional phrase, NegP, within the functional complex of categories that make up IP. Although NegP has proved very promising as an explanatory phenomenon, it has also been the source of much controversy. Several contradictory proposals have been put forth concerning the location of NegP within an expanded theory of IP, and also whether English not is the head of NegP or its specifier (Pollock, 1989; Ouhalla, 1990, 1991). While each of these proposals has its merits, none to date have been able to fully account for all of the details that arise in the negation data. The main difficulty that negation poses for theories of phrase structure is that, although the relative ordering of a functional category is ordinarily directly correlated with the ability of the category to block X0-movement of any lower functional categories, the ordering properties and blocking properties of negation are perplexingly inconsistent. This paper will examine the advantages and shortcomings of the previous accounts of negation, and develop a new proposal for NegP and the status of not which will allow a unified, non-stipulative explanation for both the ordering and the blocking facts.

1. Locating NegP

For any given inflectional category, a variety of methods can be used to determine the position of that category within the verbal functional complex, IP. The most obvious way to discover the order of the functional categories is to check the relative surface order displayed by the morphemes used to realize the functional categories, since this order, according to the Mirror Principle (Baker, 1985, 1988), is expected to directly reflect the order in which the morphemes are added or checked by

---

1 Although most of the discussion that follows will be based on the behavior of not, it should be kept in mind that NegP represents only one of the two possible realizations of the general phrase AssertionP. Throughout the paper, comparable arguments can always be constructed for affirmative emphasis, but since the affirmative morpheme is suprasegmental in nature ([+stress]), its presence is not as easily represented in written work as that of not.

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the syntax. Although it has been suggested that bound morphemes need not always obey the Mirror Principle (Speas, 1991), this is not the case with free morphemes. The reason for this is that the Head Movement Constraint alone suffices to ensure that free morphemes will appear in the same relative order in which they are generated.

The Head Movement Constraint also provides an additional method that can be used to determine the relative ordering of the functional categories. Namely, since the HMC prevents one X0 from skipping over another during X0-movement, any X0, for instance, Y0 in (1), which dominates another (Z0), will serve to block the X0-movement of the lower X0 (Z0); the lower X0 (Z0) will not be able to move to any X0-position above the one occupied by its blocker (Y0):

\[(1)\]

\[
\begin{array}{c}
\text{WP} \\
\downarrow \text{W'} \\
\downarrow \text{YjW} \\
\downarrow \text{YP} \\
\downarrow \text{Y'} \\
\downarrow \text{tj} \\
\downarrow \text{ZP} \\
\downarrow \text{Z'} \\
\end{array}
\]

(Mitchell, 1992)

\[(Y = \text{free morpheme})\]

This characteristic property of X0-movement can be capitalized upon by examining which categories are able to prevent which other categories from reaching certain positions. If one X0 is found to block another X0, that blocking X0 must be the higher of the two in the phrase structure.

Both of these approaches have been used in investigations of NegP that appear in the literature. However, as mentioned above, the ordering properties of negation in English are not consistent with the blocking properties, and no account of English NegP to date has been able to take care of the inconsistencies.

1.1 The Position for Sentential Negation is Unique

Not only has there been wide disagreement concerning the location of NegP, but there also has not been a complete consensus in the literature over whether the evidence is sufficient to merit positing a special functional category for negation (Cowper, 1991; Ernst, 1992). Researchers who are reluctant to adopt the NegP hypothesis point out that not can
appear in a variety of positions within a verbal complex:

(2) The donkey must (not) have (not) been (not) being (not) beaten.

To account for such facts, it is typically suggested that *not* is not functional, but adverbal in nature, and like other adverbs, can be adjoined almost freely within the phrase.

The problem with such an analysis is that not all *not* positions are equal. *Not* can only be contracted to *n’t* in one position:

(3) The donkey mustn’t *havn’t *beenn’t *beingn’t beaten.

In addition, *do*-support with main verbs is only found with exactly this *not* and no others:

(4) a. The donkey did not eat.
   b. *The donkey must have done not eat, but slept.
   c. *The donkey must have been doing not eat, but sleeping.
   d. *The donkey must have been being done not beat, but fed.

Most importantly, all instances of non-contractible *not* are associated with a special focus interpretation. The presence of focus is indicated with a characteristic intonation pattern; focus can also be detected through the possibility of being able to add a contrary rejoinder to the phrase:

(5) a. FThe donkey must have been being not beaten, but fed.
   b. FThe donkey must have been not being beaten, but instigating the beating of some other animal.
   c. FThe donkey must have not been being beaten, but already beaten.
   d. The donkey must not have been being beaten, but the cat may have.

A rejoinder to a phrase containing a non-contractible *not* can only contradict the element that immediately follows the *not*. If a contrary rejoinder is added to a phrase containing a contractible *not*, the truth value of the entire phrase, including the subject, can be put into question. Indeed, this is why contractible *not* has been identified as sentential negation and non-contractible *not* is simply constituent negation. It is concluded that there is only one position for sentential negation in a clause, and it is this position which Pollock characterizes as NegP.
1.2 Pollock's Analysis of NegP

According to Pollock, sentential negation is seated in NegP, a functional phrase generated between TP and AgrP:

(6)

Pollock based his analysis on the following arguments: There are two negative elements in French, *ne* and *pas*. Of these, *ne* appears capable of movement, so it is presumably in an X0-position; *pas* is arguably a specifier element. In tensed clauses, the verbal element bearing tense (e.g., main verb) appears between *ne* and *pas*:

(7) Pierre n’aime pas Marie. (Pollock, 1989 (2b))
Pierre *ne* likes not Marie.

In contrast, in infinitival clauses, main verbs must follow *pas*:

(8) Ne pas sembler heureux est une condition pour écrire
    ne not to seem happy is a prerequisite for writing
    des romans. (Pollock, 1989 (16a))
    novels.

On the basis of facts such as these, Pollock proposes that verbs move to the position containing the tense feature in tensed clauses, and that this movement pulls the verb across *pas*, generated in a lower phrase:

---

2 Non-lexical verbs in French are able to appear before *pas*, for reasons that are tangential to the current discussion.
In infinitival phrases, no such feature is generated in the tense phrase, so the verb does not move (or cannot) move past \textit{pas}.\footnote{\textit{Ne} is a clitic and thus is required to move to T^0, even in infinitives (Pollock, 1989, p. 414).}
(11) a. John often kisses Mary. \hspace*{1cm} (Pollock, 1989 (4c))
b. Jean embrasse souvent Marie. \hspace*{1cm} (Pollock, 1989 (4b))
Jean kisses often Marie.

In order to explain these facts without relying on positing cross-linguistic variation in phrase structure or unprecedented movement processes, Pollock proposes that manner adverbs and main verbs are generated in the same positions in both French and English, but that main verbs move in French across the adverbs:

(12) a. (French)

\[
\text{ZP} \rightarrow \text{Z'} \rightarrow \text{Z}^0 \rightarrow \text{VP} \rightarrow \text{Adv} \rightarrow \text{V'} \rightarrow \text{embrasse}
\]

b. (English)

\[
\text{ZP} \rightarrow \text{Z'} \rightarrow \text{Z}^0 \rightarrow \text{VP} \rightarrow \text{Adv} \rightarrow \text{V'} \rightarrow \text{kisses}
\]

If TP were the only functional phrase in IP besides NegP, it would be expected that verbs could never precede adverbs in infinitives in French, since to do so, they would have to move to T^0, which has just been shown not to be possible. Nevertheless, verbs can optionally precede adverbs in infinitives:

(13) Oublier presque son nom, ça n’arrive pas fréquemment. \hspace*{1cm} (Pollock, 1989 (27d))
To forget almost one’s name that ne happens not frequently.
‘To almost forget one’s name doesn’t happen frequently.’
This possibility requires the positing of an additional functional phrase, above the VP, but below NegP. Since IP has traditionally been assumed to contain at least TP and AgrP, and the phrase above NegP is associated with tense, Pollock proposes that the lower phrase is AgrP.

In this manner, Pollock arrives at the following, which he claims represents the structure of English as well as French:

(14)

\[ TP \]
\[ T' \]
\[ T^0 \]
\[ NegP \]
\[ Neg' \]
\[ Neg^0 \]
\[ AgrP \]
\[ Agr' \]
\[ Agr^0 \]
\[ VP \]

Although Pollock’s arguments are initially convincing, subsequent research has shown that there actually can be a certain amount of cross-linguistic variation concerning the relative ordering of the functional categories, particularly with negation (Laka, 1990; Ouhalla, 1990; Mitchell, 1992). If so, then it can no longer be assumed that the relative position of NegP is the same in French and English. Since the vast majority of Pollock’s arguments are based on French data, his claim that NegP is generated between TP and AgrP in English, although still quite plausible, is now in need of independent support.

One possibly problematic fact for Pollock’s analysis of English is that, if infinitival to is generated in T^0, and NegP is below TP, then the unmarked relative order of these two elements is expected to be ‘to not’:

(15)  
\[ \begin{align*} 
& a. \quad \text{The farmer promised to not beat her donkey (but feed it).} \\
& b. \quad \text{The farmer promised not to beat her donkey.} 
\end{align*} \]

However, the opposite order is given preference by native speakers. To explain why the order not to is acceptable at all, Pollock suggests that to may optionally be generated in Agr^0 (footnote 12), but allowing the same form with the same meaning and function to be optionally generated in several different locations is not a satisfying solution.

Pollock does not make any specific claims regarding the headedness of
not. He does note (p. 397), however, that if not is the head of NegP, it is expected to block the progress to T\(^0\) of all lower verbs, including the auxiliary verbs:

(16)

Pollock suggests that the fact that auxiliary verbs do not seem to be blocked by not could possibly be explained within the confines of the HMC by an extension of Relativized Minimality (Rizzi, 1990).

Unfortunately, extending Relativized Minimality is not likely to yield a solution capable of explaining these data. Relativized Minimality allows for movement to have a certain degree of non-locality. It does this by relativizing the need for movement to be strictly local; any element, whether A, A' or X\(^0\), is free to move over any other element, provided the skipped elements are not of the same class as the moving element. Extending Relativized Minimality to explain why auxiliaries are able to move past not would entail a division of the class of X\(^0\)s such that the auxiliaries would be of one type and not of another. Such a division would be quite plausible, since negation is commonly assumed to be an operator, while other functional categories are not. Then it could be said that auxiliaries can skip not in their movement to T\(^0\) because not is a +op X\(^0\) and the auxiliaries are -op X\(^0\)s.

However, the behavior of the main verbs becomes problematic in such an account. When not is not present, main verbs are able to reach T\(^0\),\(^4\) but

---

4 In Pollock's original analysis, English main verbs could not move until LF, so affixes moved down to the verbs through Affix-Hopping
the addition of *not* to the phrase blocks this movement:

(17) a. The donkey eats grain.
    eat-Pres

   b. The donkey ate the grain.
    eat/Past

(18) a. The donkey does not eat grain.
    do-Pres not eat

   b. The donkey did not eat the grain.
    do/Past not eat

In order to explain this in accordance with the proposed extension of Relativized Minimality, main verbs would presumably have to be of the same category as negation; i.e., +op X⁰s. Such a classification is not at all intuitive. Moreover, it would also have to be explained why main verbs, as +op X⁰s, would appear to be able to occupy the ordinary functional positions, which are -op. For these reasons, the extended Relativized Minimality approach does not seem promising.⁵

1.3 Using Blocking Data to Locate the Position of NegP

Ouhalla (1990) seeks to explain the blocking properties of *not* without producing the inevitable problems inherent in using an extension of Relativized Minimality. He places special emphasis on the fact that with the simple addition of *not* to a clause, main verbs, and only main verbs, are blocked from further movement. To Ouhalla, these facts suggest that negation in English is a head, but it is not generated immediately below

---

⁵ Rizzi (1990) presents an alternative version of Relativized Minimality which is able to explain why main verbs seem to be blocked by negation. According to this account, main verbs never move from their base-generated positions, not even at LF (p.23). Affixes must then move down to the verb at LF, but the tense affix, being an operator, will be blocked if negation is present, since NegP also contains an operator. Although quite successful in explaining the interaction of main verbs with negation, this proposal requires that the downward movement property of affix-hopping be accepted without reservation.
tense, as in French, but rather, immediately above the verb:

(19)

\[
\begin{array}{c}
\text{AgrP} \\
\text{Agr'} \\
\text{Agr}^0 \\
\text{TP} \\
\text{T'} \\
\text{T}^0 \\
\text{AspP} \\
\text{Asp'} \\
\text{Asp}^0 \\
\text{PassP} \\
\text{Pass'} \\
\text{Pass}^0 \\
\text{NegP} \\
\text{Neg'} \\
\text{Neg}^0 \\
\text{VP} \\
\text{V'} \\
\text{V}^0
\end{array}
\]

In such a structure, *not*, as a head, is automatically expected to block the $X^0$-progress of the verb, but it will have no effect on the movement of auxiliaries, since the auxiliaries are all base-generated above *not*. Thus, Ouhalla's proposed structure is quite successful at explaining the blocking properties of *not*.

Unfortunately, the structure in (19) is not nearly as successful at explaining the ordering data. Most notably, with a structure as in (19), all auxiliaries are always expected to precede *not*. However, whenever more than one auxiliary is present, it is found that sentential *not* actually precedes all but the first auxiliary:
(20) a. The donkey must have been being not beaten (but fed).
   b. The donkey must not have been being beaten.

Ouhalla recognizes this problem in footnotes (1990, footnote #14; 1991, chapter 2, footnote #14), but does not offer any attractive solutions. Conceivably, such an ordering might be explained by moving not as a clitic to the second position in the verbal complex at some late point in the derivation. This, however, would not suffice to solve two other ordering problems. Namely, contrary to Ouhalla’s claims and predictions (1990, footnote #12), as noted above, the unmarked order of infinitival to and not is not to:

(21) a. The farmer promised to not beat her donkey (but feed it). (=14)
   b. The farmer promised not to beat her donkey.

If to is generated in T°, not somehow must move to first position in infinitival clauses rather than second. The same would have to be said for imperative clauses:

(22) Don’t be beating your donkey when the inspector arrives!

In sum, Ouhalla’s structure could only generate the correct ordering data if there were either two positions for the base-generation of not, or two positions for the cliticization of not. Neither of these options is particularly attractive.

1.4 Using Ordering Data to Locate the Position of NegP

Since the blocking data did not seem particularly useful for determining the position of NegP, a reasonable alternative approach might be to set aside for the time being the blocking facts and turn all attention to the ordering facts. One conceivable reason why negation does not block the movement of auxiliaries is that it may actually be a bound morpheme rather than a free morpheme, based on the fact that sentential negation is always contractible to the bound form n’t (Foley, 1992; c.f. Bernstein, 1992). Such a proposal would receive independent motivation from the fact that it would make negation similar in morpheme-type to its affirmative counterpart, [+stress], which is inherently bound; this would be consistent with NegP being generalizable to AssertionP (AstP) as suggested in Pollock (1989), Laka (1990) and Mitchell (1991). As a feature realized as a bound morpheme, negation would require support from lower X°s; it would not be expected to block the movement of any X°s. The fact that main verbs are blocked in the presence of negation would have to
receive an alternative analysis.

The task is then to determine the position in which the negative feature is generated; i.e., the position in which \textit{n't} is checked. According to the Mirror Principle (Baker, 1985, 1988), the order of bound morphemes is expected to directly reflect the order in which they are checked. Thus, to find the base-generated position of negation, the order of \textit{n't} with respect to other morphemes should be examined. What is found is that \textit{n't} follows the tense morpheme:

(23) a. ha-s-n't
    have-Pres-Neg

b. ha-d-n't
    have-Past-Neg

The only way to achieve this order is to posit that NegP is actually above TP:

(24)

\[
\text{NegP} \quad \text{Neg'} \quad \text{TP} \quad \text{T'} \quad \text{AuxP} \quad \text{Aux'} \quad \text{have}
\]

This position will not only explain the ordering of the bound morphemes, but it also automatically takes care of the ordering of negation with respect to infinitival \textit{to}:
(25)  a.  
\[
\begin{array}{c}
\text{NegP} \\
\text{Neg'} \\
\text{not} \\
\text{TP} \\
\text{T'} \\
\text{to} \\
\text{AuxP} \\
\text{have} \\
\text{Aux'} \\
\end{array}
\]

b. Not to have visited Paris by the time you’re thirty is a tragedy.

The only fact that remains to be explained in negative infinitives is why n't must be obligatorily realized as not:

(26) *The farmer promised ton’t beat her donkey.

One obvious way to do this would be to posit that to is unable to move, leaving the negative feature in Neg⁰ without the support of a free morpheme, necessitating the use of the free alternant of n’t.

However, this brings up one of two crucial problems with the negation as n’t analysis: In general, n’t seems to be in complete free variation with not; in formal registers, not is even the preferred form of negation. Aside from the fact that syntactic processes are usually not optional, the ordering properties of n’t are inconsistent with those of its free variant. Sentential not always follows the tensed element; it never precedes it, as would be expected given the structure in (25):

(27) Let it be hereby known that...

a. donkeys (*not) must (not) be beaten...
   must not

b. donkeys (*not) have (not) been beaten...
   have(Pres) not

c. donkeys (*not) were (not) being beaten...
   be/Past not

d. donkeys (*not) were (not) beaten...
   be/Past not
Worse yet, if NegP is generated above TP, then there is no conceivable way that the presence of negation in a clause should be able to have any effect at all on the ability of main verbs to move to T⁰:

\[(28)\]

\[
\begin{array}{c}
\text{NegP} \\
\text{Neg'} \\
\text{+neg} \\
\text{TP} \\
\text{T'} \\
\text{+past} \\
\text{VP} \\
\text{V'} \\
\text{eat}
\end{array}
\]

The only way such intervention could be achieved from above would be through the use of downward movement rules or non-local selection, both of which are inconsistent with the assumptions of modern syntactic theory. Thus, an analysis of negation based solely on ordering facts has proved no more tenable than that based solely on the blocking facts.

2. **Reconciling the Ordering Properties of Negation with the Blocking Properties**

2.1. **Reconciling the Ordering of n't and not**

The most important fact that emerges from the above discussion is that, regardless of any of the other details of the eventual analysis, it is absolutely essential that NegP intervene between main verbs and TP; i.e., NegP must be below TP. As for the ordering data, only the ordering of not is consistent with such a location (27). The n't ordering facts lead us to posit an impossible structure. In other words, only the not data are reliable; the relative ordering of n't must have some alternative explanation.

The most likely solution is that n't-affixation does not apply in the syntax at all, but rather at PF; i.e., n't-affixation is a phonological cliticization rule:

\[(29)\] Neg-Cliticization: \hspace{1cm} (cf. Chomsky, 1957 (37))

Not may optionally cliticize to the element in T⁰, taking the form n't.
As a PF rule, Neg-Cliticization would apply only after all syntactic rules have applied. Thus, the *n't is expected to follow tense morphology. Furthermore, positing that the realization of negation as *n't is a PF rule also explains its optionality.

2.2. Reconciling the Ordering of Not and To

Generating *not below TP once again brings up the problem of the unmarked order of negation in infinitives. If to is generated in T₀ and not is generated below T₀, to should precede not:

(30)

One of these two assumptions must be incorrect; either to is not generated in T₀ after all, or NegP must be above TP. As argued in section 1.4., there is no way that NegP can be generated above TP in a manner consistent with the main verb blocking facts, so the only possible conclusion is that to is not generated in T₀ after all. Although such a proposal is at odds with current assumptions, Pullum (1981) presents six strong independent arguments for just such an analysis. In the interest of conserving space, only one of those arguments, that based on ellipsis, will be considered in detail here; the reader is referred to Pullum’s original work for the remainder of the arguments.

Akmajian, Steele and Wasow (1979), show that ellipsis may apply to virtually any phrase within the inflectional complex:

(31) John couldn’t have been studying Spanish, but Bill could (have (been (studying Spanish)))

(ASW, 1979, (48))

The only constraint on ellipsis is that the entire phrase be deleted, not some subset, and that all of the elements residing in the phrases before the ellipted phrase remain unscathed:

(32) *John couldn’t have been studying Spanish, but Bill could have been studying.
In particular, ellipsis may apply following TP (33a), or following NegP (33b):

(33)  
a. John has not been to Paris, but Mary [TP has].  
b. John has been to Paris, but Mary [TP has [NegP not]].

It may not, however, apply following not alone, since the phrase above NegP (TP) must also be represented:

(34)  *John has been to Paris, but Mary [NegP not].

Since constituent negation is a modifier of a phrase, ellipsis cannot apply immediately following constituent not, since this would entail the ellipsis of only part of a phrase:

(35)  
a. *John must have been studying in Paris, but Mary [TP must [PerfP have [ProP not]]].  
b. *By three o’clock I will have finished but you [TP will [PerfP have [VP not]]].(Pullum, 1981, (23a)

Ellipsis can occur below negation, provided the process applies at a phrase boundary:

(36)  
a. John must have been studying in Paris, but Mary [TP must [NegP not]].  
b. John must have been studying in Paris, but Mary [TP must [NegP not [PerfP have]]].  
c. John must have been studying in Paris, but Mary [TP must [NegP not [PerfP have [ProP been]]]].

As might be expected given the numerous phrases to which ellipsis can apply, ellipsis can also be found following to:

(37)  John did not promise to go to Paris, but Mary promised [TP to].

If to is in T⁰ as commonly assumed, then ellipsis with negation following to ought to be possible, just as in (33b); however, what is found is exactly the opposite:
(38) a. *John promised to go to Paris, but Mary promised [TP to [NegP not]].
   b. John promised to go to Paris, but Mary promised [TP [NegP not [?P to]]].
   c. *You usually pay a lot of attention to what McCoy says, but you ought [TP to [NegP not]].
   (Pullum, 1981, (24))
   d. You usually pay a lot of attention to what McCoy says, but you ought [TP [NegP not [?P to]]].

The most economical way to explain the fact that not must precede to in ellipsis contexts is to posit that NegP is above the phrase in which to is generated, possibly 'Inf(itive)P', and that ellipsis applies after this 'InfP'.

!(39)\[
\begin{array}{c}
TP \\
\hspace{1cm} T' \\
T^0 \\
\hspace{1cm} NegP \\
\hspace{1cm} Neg' \\
\hspace{1cm} Neg^0 \\
\hspace{1.5cm} InfP \\
\hspace{1cm} Inf' \\
\hspace{1.5cm} Inf^0 \\
\end{array}
\]

Thus, to cannot be in T^0, and the unmarked relative surface ordering of not and to reflects the order of their base-generated positions.

2.3. Reconciling the Ordering of not and the (Anti)-Blocking Effects

The strongest objection that arises when NegP is posited below TP is that, as a head, not in that position is expected to block the auxiliaries from reaching T^0. Having eliminated the possibility that an extension of

---

6 This is not to suggest that a new functional position must be created solely for the benefit of to. A more in depth study of the facts shows that the position in which to is generated is shared by several other categories, including at least the modals and imperative mood. Arguments for the necessity of positing such a phrase can be found in Mitchell (1993).

7 For an alternative account of these facts, see Ernst (1992).
Relativized Minimality might be brought to bear in this situation, it seems that there is no possible way to maintain both that NegP is below TP and that not is in Neg\(^0\). Fortunately, it is not the case that both must be true; recall that not, due to the fact that it intervenes with the \(X^0\)-movements of main verbs, was simply assumed above to be an \(X^0\), without any independent motivation being given. Relevant to this discussion is the fact that main verbs are also known to be blocked from occupying another \(X^0\)-position, \(C^0\), so the cause of the main verb blockage may likely stem from properties of the verbs themselves, and not from the particular \(X^0\)-positions that they are blocked from. Furthermore, the affirmative counterpart of not, [+stress], is inherently bound, so even if it were generated in Ast\(^0\), it should require support, rather than block movement. The fact that do is obligatory with main verbs under affirmation despite the bound nature of affirmation strongly suggests that the fault is in the verb, not the functional category. In short, not need not be posited in Neg\(^0\) to achieve its blocking effects; it may equally well be in the specifier of NegP.

There are several independent reasons for positing that not is a specifier rather than a head. For instance, one notable fact about English is that all of the other free functional morphemes select for a complement in a particular participial form (cf. Chomsky, 1957):

\[
\begin{align*}
(40) & \quad \text{a. modal + bare stem: must have, must be, must eat} \\
& \qquad \text{b. perfect ‘have’ + past participle: have been, have eaten} \\
& \qquad \text{c. progressive ‘be’ + present participle: is being, is eating} \\
& \qquad \text{d. passive ‘be’ + past participle: is eaten}
\end{align*}
\]

The only functional morphemes which do not put such a requirement on their complement are the bound morphemes:

\[
\begin{align*}
(41) & \quad \text{a. past + any participle: could have, had been, was eating, was eaten} \\
& \qquad \text{b. present + any participle: can have, has been, is eating, is eaten}
\end{align*}
\]

If not were a head, it would constitute the sole counter-example to this generalization:

\[
(42) \quad \text{not + any participle: must not have, has not been, was not being, was not eaten}
\]

Another behavior that heads are expected to exhibit is that of participating in \(X^0\)-movement, as well as blocking it. In languages in which the negative morpheme is unambiguously an \(X^0\)-element, this is exactly what is found.
In Finnish, for instance, NegP is located between AgrgP and TP:

\[(43)\] \hspace{1cm} (Finnish: Mitchell, 1991)

As expected, the negative morpheme has no effect on the ability of lower X0s to reach T0, but it does block those X0s from reaching Agrg0, and it is the negative morpheme which bears moves to Agrg0 and bears the Agrg affixes:

\[(44)\] 'to kill' (negative) \hspace{1cm} (Finnish: Mitchell, 1992)

a. present: Neg-Agr verb \hspace{1cm} b. past: Neg-Agr verb-T

<table>
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<tr>
<th></th>
<th>SG</th>
<th>PL</th>
<th>SG</th>
<th>PL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>e-n tapa</td>
<td>e-mme tapa</td>
<td>e-n tappa-nut</td>
<td>e-mme tappa-neet</td>
</tr>
<tr>
<td>2.</td>
<td>e-t tapa</td>
<td>e-tte tapa</td>
<td>e-t tappa-nut</td>
<td>e-tte tappa-neet</td>
</tr>
<tr>
<td>3.</td>
<td>e-i tapa</td>
<td>e-ivät tapa</td>
<td>e-i tappa-nut</td>
<td>e-ivät tappa-neet</td>
</tr>
</tbody>
</table>

In Livonian, on the other hand, the relative positions of TP and AgrgP with respect to NegP are reversed, with TP above NegP, and the main expression of Agrg below NegP (Mitchell, 1992):
Since negation is realized by an $X^0$ in this language and NegP intervenes between lower $X^0$s and TP, it is the negative morpheme which alone bears the tense morphology, while lower $X^0$s are free to bear Agr$_s$ morphology:

(46)  

(to kill' (negative)  

(Livonian: Kettunen, 1938)

a. present: Neg-(Agr)$^8$ verb-Agr  
b. past: Neg/T-(Agr) verb-Agr

<table>
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<th>SG</th>
<th>PL</th>
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<tbody>
<tr>
<td>1.</td>
<td>ä-p tappå-ø</td>
<td>ä-p tappå-m</td>
</tr>
<tr>
<td>2.</td>
<td>ä-t tappå-ø</td>
<td>ä-t tappå-t</td>
</tr>
<tr>
<td>3.</td>
<td>ä-p tappå-ø</td>
<td>ä-p tappå-t</td>
</tr>
</tbody>
</table>

Thus, there is no a priori reason why English *not* should not be able to bear the morphology of higher $X^0$ positions, if it is indeed an $X^0$:

(47)  

*The donkey not-ed has eaten the grain.

The fact that a lower $X^0$ must cross *not* to reach $T^0$ and support the bound tense morphology is highly suggestive that *not* is not an $X^0$. Therefore, *not* must be in the specifier of NegP.$^9$

---

$^8$ The additional realization of limited Agr$_s$ on the negative morpheme in Livonian is discussed in Mitchell (1992).

$^9$ Rizzi (1990) presents an additional argument for the specifier status of *not*, based on fact that *not* can block A'-movement. However, as Ouhalla (1990, 1991) points out, this could be explained equally well by positing that the specifier of NegP contains a negative operator.
3. **Further Details of the Analysis: How Low is NegP (AsstP)?**

The examination of the ordering and blocking properties of negation has so far led to the development of the following structure:

(48) 

Although Pollock only posited the presence of one other functional phrase between TP and VP (AgrP), subsequent research has shown that it is quite likely that there are additional intervening phrases, such as AspectP or VoiceP (Rivero, 1990; Carstens, 1989; Mitchell, 1991; Ou Halla, 1990, 1991; Cowper, 1991). If so, to complete the analysis of NegP, the relative position of NegP with respect to the remaining functional phrases must also be determined. It has already been shown that NegP must be generated above the position in which infinitival to is introduced into the structure; the other functional free morphemes will now be discussed in turn.

3.1 **NegP and the Modals**

Modals always precede all other elements in the verbal complex, so they are arguably generated in a relatively high position:

(49) a. must eat  
b. must be eaten  
c. must be eating  
d. must have eaten
When a modal co-occurs with *not*, the modal always precedes the *not*:

(50) a. must not eat
    b. shall not eat
    c. can not eat
    d. will not eat
    e. may not eat

However, since modals only occur in tensed sentences, and they are the highest element in the verbal complex, it is the modals which arguably must serve to support the tense morphology in $T^0$. To do this, however, modals could conceivably be generated in $T^0$ itself (51a), or else they might be generated in some lower position, and obligatorily move to $T^0$ (51b). Either scenario would ultimately place them before *not*:

(51) a.

\[
\begin{array}{c}
\text{TP} \\
\text{T'} \\
\text{could} \\
\text{NegP} \\
\text{not} \\
\text{Neg}^0 \\
\text{...}
\end{array}
\]
Thus, simple surface ordering data will not suffice to show the relative positions of NegP and the phrase in which modals are generated.¹⁰

3.2. NegP, the Aspectual Auxiliaries 'Have' and 'Be' and the Passive Auxiliary 'Be'

The situation with the remaining auxiliaries is much more clear. Although each of these auxiliaries is able to appear before not:

(52) a. has not eaten  
     b. is not eating  
     c. was not eaten

d this is only true when the auxiliaries in question are the first elements in the verbal complex. As the first element, they would be expected to obligatorily move to T⁰, across not. However, when the presence of another, higher X⁰ blocks the X⁰-progress of these auxiliaries, they always follow not:

(53) must not have eaten  
(54) a. must not be eating  
     b. has not been eating

¹⁰ Although beyond the scope of this paper, independent reasons exist for positing that modals are generated below NegP (Mitchell, 1993).
(55)  a.  must not be eaten  
b.  has not been eaten  
c.  was not being eaten

It can be reasonably concluded, then, that the base-generated position of these auxiliaries must be below that of not; i.e., NegP must be above any 'AuxPs':

(56)

```
TP
  /\   T'
 /\           to
/\      ...
/\                    NegP
/\                      not
/\                      Neg'
/\                  Neg^0  ...
/\                    AuxP
/\                      Aux'
/\                  Aux^0  ...
```

3.3. NegP and Imperatives

A curious fact about assertion and imperatives is that all verbs in these contexts require do, not just main verbs:

(57)  a.  *Be not beating your donkey when the inspector arrives!  
b.  Don't be beating your donkey when the inspector arrives!

The optimal explanation for the obligatory presence of this do would have it inserted by the same rule that is responsible for supplying do in other contexts, or the rule known as do-support:

(58)  Do-support  

(adapted from Chomsky, 1957)

Insert do to support a feature which will otherwise not receive support.
The main complication is in justifying why the rule applies with all verbs in imperatives rather than with the limited set of verbs usually associated with do-support.

In order for do-support to be triggered, some functional feature must be left unsupported; i.e., if it is do-support which inserts do in negative imperatives, some feature in these contexts must not be otherwise capable of receiving support. Recall that in ordinary tensed main verb clauses, the verb is able to reach T⁰, but the addition of negation results in obligatory do-support with the do bearing the tense morphology, and this was taken as evidence that NegP must intervene between VP and TP:

(59) a. 

\[
\begin{array}{c}
TP \\
| \text{T'} \\
| +\text{past} \\
| \text{...} \\
| \text{NegP} \\
| \text{Neg'} \\
| \text{Neg}^0 \\
| \text{...} \\
| \text{VP} \\
| \text{V'} \\
| \text{V}^0
\end{array}
\]
Thus, one possible approach to explain the need for *do* in negative imperatives might be to posit that, as in tensed main verb clauses, NegP intervenes between the verb and the feature in need of support, imperative:

(60)

There is a major problem with such an analysis, however. As discussed above, *not* occupies the specifier of NegP, and from that position, it should
be unable to block the movement of the auxiliaries, yet the auxiliaries are, indeed, blocked. The only possible way it could interfere with movement in these contexts is if the category imperative somehow were to modify the auxiliaries in a position below NegP, making them sensitive to the same constraint that blocks main verbs from crossing NegP. However, this would be equivalent to positing that the category imperative is realized at least in part below NegP, not above it. A conservative interpretation of this last fact might then be that imperative is entirely generated below NegP, but that TP remains above NegP, and that it is tense in $T^0$ which lacks support, necessitating the insertion of do:

(61)

At this point, it should be clear that numerous stipulations will be required to make such an analysis work. Fortunately, a preferable alternative exists; namely, the addition of NegP itself could be supplying the stranded feature.

Word order facts in imperatives provide independent support for such an account. In ordinary imperatives, the subject, if present, appears in initial position as in other constructions:

(62) (You) listen up!
In contrast, in negative imperatives, the subject must follow the first verbal element, as is found with inversion contexts:

(63)  
  a. *You don’t dare!
  b. Don’t you dare!

Ordinarily, if a verbal element precedes the subject, it is assumed that that element has moved to C⁰. Thus, one could explain the word order in negative imperatives by positing that negation must for some reason move to C⁰ in imperatives. However, this would be a very odd rule indeed; no other rule in English forces C⁰ to be filled solely in the context of negation. Furthermore, such an inversion rule that would operate only in the presence of a special combination of functional category feature values would be unprecedented in any other known language.

Thus, it is preferable to posit that neither the subject nor the not move in this context, but rather that not is simply generated above the ordinary subject position in imperatives:

(64)

To avoid a needless proliferation of functional categories it makes sense to assume that this position is one and the same position as that occupied by negation in other phrases; i.e., that this is the ordinary NegP. If so, this is tantamount to claiming that subjects do not appear in the specifier of TP in imperatives, for if they did, since TP is above NegP, not would erroneously be expected to follow the subject. One likely reason why subjects might not have to appear in the specifier of TP is that TP might not even be generated in imperatives.¹¹

¹¹ This would obviously entail that the phrase containing the imperative feature meet the ordinary requirements necessary for nominative case assignment; i.e., that a spec-head agreement relation is defined within the
The question is then why the addition of AstP should trigger do-support. This reduces to determining what feature NegP brings with it, and why that feature seems to be in need of support. There is an immediate answer to what the stranded feature may be. According to the Neg-Criterion (Haegeman and Zanuttini, 1991), if the specifier of NegP is occupied by a negative operator, as would be indicated by the presence of not, the head of the phrase must concurrently contain a negative feature.

(65) a. The Neg-Criterion (Haegeman and Zanuttini 1991):
   (i) Each Neg-X^0 must be in a Spec-Head relation with a Negative operator.
   (ii) Each Negative operator must be in a Spec-Head relation with a NegX^0.

b.

\[
\begin{array}{c}
\text{NegP} \\
\text{[Neg-Op]} \quad \text{Neg'} \\
\text{not} \quad \text{[+Neg]}
\end{array}
\]

Thus, the presence of not (in the specifier of NegP) would require that there be a negative feature generated in Neg^0. This feature, lacking lexical realization by a free morpheme generated in Neg^0, would require support. The use of the category imperative seems to prevent that morpheme from being able to receive the support it needs.12

The puzzling fact is that even if auxiliary verbs are present, the negative feature seems unable to receive them as support, despite the fact that auxiliary verbs ordinarily have no trouble moving to and through Neg^0:

---

12 The careful reader may notice that such a negative feature will also be present in negative infinitives, but do-support is not triggered. The likely reason for the lack of do-Support in these contexts is that to moves to Neg^0. Bernstein (1992) presents ample evidence that to is able to move, so there is no reason why it should not be able to move to Neg^0 and provide support for the negative feature generated there.
(66) a. The farmer \( \text{TP was} \; \text{[NegP not \( \text{ProgP} \; t_i \) beating her donkey].} \)
    b. \( \text{*[NegP Not be} \; \text{[ImpP} \; t_i \; \text{[ProgP} \; t_i \; \text{beating your donkey when the inspector arrives]]]}! \)

It appears as if an mysterious invisible morpheme might be present, blocking access to \( \text{Neg}^0 \) of even the auxiliary morphemes\(^0\), but not supplying the negative feature in \( \text{Ast}^0 \) with any support:

\[
\begin{array}{c}
\text{NegP} \\
\text{not} \\
[+\text{Neg}] \\
\text{do} \\
?\text{P} \\
\text{not} \\
?\text{'} \\
[ ] \\
\text{AuxP} \\
\times \\
\text{Aux'} \\
\text{be} \\
\end{array}
\]

Although positing such a feature might initially seem a bit odd, this is essentially what Lasnik (1981) concludes on the basis of independent arguments for the makeup of the imperative element.\(^{13}\) Positing that the imperative is a null modal-like element, generated above the auxiliary morphemes, will explain why all the auxiliaries are blocked in negative imperatives. Since it is lacking in all phonological content, it will also be unable to provide morphological support for the negative feature in \( \text{Neg}^0 \). The only way to save the derivation in such a context would be to insert \text{do}.

\(^{13}\) Roberts (1985) also finds reasons for positing the presence of a null modal, but Roberts' modal is used to express subjunctive mood. For a discussion of the differences between the subjunctive and the imperative, see Mitchell (1993).
4. Summary and Conclusions

The above investigation into the ordering and blocking properties of negation has revealed the fact that NegP is located below TP, but above all of the other functional positions which make up the verbal complex, with the possible exception of 'ModalP':

\[ \begin{array}{c}
\text{TP} \\
\text{NegP} \\
\text{not} \\
\text{[+Neg]} \\
\text{(InfP, ImpP)} \\
\text{Inf', Imp'} \\
\text{Inf', Imp'} \\
\text{AuxP} \\
\text{Aux'} \\
\text{Aux'} \\
\text{VP}
\end{array} \]

Coincidentally, we have also been able to conclude that to is not generated in T\(^0\), that imperatives do not include a TP, and that the imperative morpheme is free but null. Although these last statements are contrary to common assumptions, they all receive independent support from a variety of phenomena, and have been proposed previously in the literature. The adoption of such modifications to the phrase structure will not require any major adjustment to the standard theory. Indeed, the account outlined above will simplify the theory by eliminating the need for positing construction specific or stipulative rules to explain certain problematic data.

It has also been shown that not occupies the specifier of AstP in English. As a specifier, it does not serve to block X\(^0\)-movement of lower X\(^0\)-elements. The question remains of what causes the blocking of main verbs in the presence of negation. However, as mentioned above, this blocking is most likely due to some property of the verbs themselves, rather than of negation per se, since negation does not constitute the only context in which it is found. Instead of positing a construction specific rule to block main verbs from crossing not, it would seem far preferable to unite under one rule all the contexts in which main verbs are selectively blocked. Such a rule is posited in Mitchell (1993).
References


The Position of Negation in Bengali: an account of synchronic and diachronic variation

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1. Introduction

In this paper, we investigate the phenomenon of negation in Bengali and present a proposal to account for synchronic variation and historical change with respect to the position of the negative particle *na*.

The phenomenon of negation in Bengali poses several challenges: (i) the position of the negative particle *na* in Bengali, in general, does not conform to the pattern identified in typological studies on the position of negation for head-final languages, (ii) synchronically, Bengali negation includes both preverbal and postverbal positions of *na*; and (iii) diachronically, *na* has changed from being preverbal in Old Bengali (OB) to occurring postverbally in Modern Bengali (MB).

Our proposal to account for both the synchronic and diachronic facts crucially assumes that: (i) *na* projects a Negation Phrase (NEGP) (cf. Pollock 1989, Laka 1990, Ouhalla, 1990), and (ii) movement is constrained by Relativized Minimality (cf. Rizzi, 1990), in particular, *X*\(^0\) movement is constrained by a ‘Relativized’ Head Movement Constraint (HMC) (cf. Baker & Hale, 1990). We also adopt (iii) the proposal for feature-checking in Chomsky (1992), extending it to sentential negation.

Our account of synchronic variation in the position of *na* hinges on a distinction between constituent and sentential negation. Evidence for this difference comes from word order and the absence vs. presence of tense. In our proposal, sentential negation occurs when *na*, generated as head of NEGP (a lexical projection immediately above VP), raises to the head of *ΣP* (a functional projection immediately above TP) for feature-checking purposes. We propose to further relativize the definition of potential antecedent governor to distinguish not only between lexical and functional heads but within lexical heads between P (predicate) and P' (non-predicate) positions. We account for historical change in the position of *na* by proposing that OB had an in situ strategy for negation, while MB has a movement strategy in the syntax.

As a working hypothesis, we propose that, in general, historical change does not result from creation of new positions in an unconstrained way – reanalysis of a category or position requires the category or position to ‘exist’ (be projected) as constrained by the grammar of the language,
ultimately as constrained by UG. More specifically, historical change that affects the syntactic structure of the language and involves movement of a constituent: (i) is subject to constraints on movement, and (ii) can only take place provided that a potential landing site already exists.

This paper is organized as follows: section 2 presents the synchronic and diachronic facts about Bengali negation. In section 3, we show that na can license NPIs and block wh-movement of an adjunct from an embedded CP. Section 4 discusses previous studies on Bengali negation, as well as the proposal for NegP. In section 5, we present our account for synchronic variation and historical change in the position of na. Section 6 gives our conclusions.

2. Facts about Bengali Negation: typological differences, inflected negatives and na in MB, historical change.

2.1 Negation in Typological Studies: Bengali as an exceptional case

Typological studies of the position of negation (as in Dryer, 1988 and Dahl, 1979) have identified the patterns in (1): (i) inflected negative particles tend to behave like auxiliaries, i.e., the inflected negative particle occurs postverbally in head-final (SOV) languages and preverbally in head-initial (SVO) languages; and (ii) uninflected negative particles tend to occur in preverbal position, irrespective of the head-parameter value of the language.

(1) i.  S O V NEG+INFL
      S NEG+INFL V O

ii.  S O NEG V+INFL
     S NEG V+INFL O

The first pattern is expected: head-parameterization predicts occurrence of the NEGaux to the right of the verb in head-final languages and occurrence of NEGaux to the left of the verb in head-initial languages. With respect to the second pattern, Bengali is singled out as an exception. In Bengali, the uninflected negative particle is not preverbal in finite main clauses, but it occurs in postverbal position.

(2) a. Se bhat khæ na
      he rice eat not
      'he does not eat rice'

b. *Se bhat na khæ

Clearly, we require an account for (i) the preverbal position of the
uninflected negative particle across head-initial and head-final languages; (ii) the postverbal position for the uninflected negative particle in Bengali, and (iii) for the difference between (i) and (ii). In this paper, we address (ii), and (i) to the extent that it also applies to Bengali. The account we propose could contribute to an explanation of the cross-linguistic typological pattern.

2.2 Inflected Negatives

Bengali has a number of negative particles: *nOe* for the ‘equational’ *hOe*, *nei* for the ‘existential’ *ache*; and *ni* in the ‘perfective’, as shown in (3). These are the result of ‘fusion’ of the negative particle *na* and the inflected copula or auxiliary verb.¹ We will refer to these as ‘inflected’ negative particles.

(3) i. *nOe* : equational
    ii. *nei* : existential
    ii. *ni* : perfective

In (4) thru (6), we give examples of sentential negation with inflected negative particles. In (4b), *nOe* negates an ‘equational’ sentence; in (5b), *nei* negates an ‘existential’ sentence.

(4) a. *sOhore gOrom (hOe)*
    city-LOC hot (is)
    ‘it is hot in the city’
    b. *sOhore gOrom nOe*
    ‘it is not hot in the city’

(5) a. *bagane gach ache*
    garden-LOC plant is
    ‘there are trees in the garden’
    b. *bagane gach nei*
    ‘there are no trees in the garden’

(6) shows that in the perfective, the present and past tenses *ami Sunechi* and *ami Sunechilam* are neutralized with negation, so that *ami Suni ni* in

¹ The existence of negative copular verbs suggests that at the time this occurred, *na* was to the left of the copula or auxiliary verb. However, it is likely that these ‘negative verbs’ are perceived now as ‘fossilized’ forms which are no longer formed in the syntax but instead exist in the Lexicon (as lexical entries).
(6e) is the negative form for (6a) and (6b):2

(6)  
   a. **ami Sunechi**  
      I hear-PERF-have-PRES-1P  
      ‘I have heard’
   b. **ami Sunechilam**  
      I hear-PERF-have-PAST-1P  
      ‘I had heard’
   c. *ami Sunechi na
   d. *ami Sunechilam na
   e. **ami Suni ni**  
      I hear-PRES-1P negPERF  
      ‘I have/ had not heard’

It should be noted that the inflected negatives always occur in postverbal position, in accord with the general pattern in (1i-ii). Thus, they present no special problem and need not be discussed in further detail here; we turn, instead, to the distribution of the uninflected negative particle *na*.

2.3  *Na in Modern Bengali*

Unlike inflected negatives, the negative particle *na* in Modern Bengali does constitute an exception to the general pattern in (1i-ii).

In main finite clauses and in je- complement clauses *na* is constrained to postverbal position, as shown in (7) and (8):

(7)  
   a. **Se bhat khae na**  
      he rice eat not  
      ‘he does not eat rice’
   b. *Se bhat na khae

(8)  
   a. **ami Sunechi je Ram aste parbe na**  
      I heard that Ram to-come will-be-able not  
      ‘I heard that Ram willnot be able to come’
   b. *ami Sunechi je Ram aste na parbe

In conditional subordinate clauses, however, *na* must be preverbal. This is
true not only for the conditional expressed with the non-finite suffix -le, as in (9), but also for the correlative structure ‘jodi - ta hole’ as in (10):

(9) a. tumi Sekhane na gele, ami jabo na
    you there not go-if, I will-go not
    ‘If you do not go there, I will not go’

    b. *tumi Sekhane gele na, ami jabo na

(10) a. tumi jodi Sekhane na jao, (ta hole) ami jabo na
    you if there not go, (then) I will-go not
    ‘If you do not go there, I will not go’

    b. *tumi jodi Sekhane jao na, (ta hole) ami jabo na

Given the word order patterns for negation identified in typological studies, we would have expected to find preverbal negation (as in (9) and (10)) across both main and subordinate tensed clauses. This is not the case in Bengali, as the previous examples show. However, the preverbal pattern also occurs in Bengali when a non-finite verb (as in (11a)) or a ‘verbal noun’ (as in (12a)) is negated:

(11) a. kar SONge dEkha na korte cay?
    who-GEN with seeing not do(INF) want
    ‘who would you rather not meet?’

    b. *kar SONge dEkha korte na cay?

(12) a. [Bangla na Sekha] OSombhob hObe
    Bengali not learning problem be-FUT-3P
    ‘not to learn Bengali will be a problem’

    b. *[Bangla Sekha na] OSombhob hObe

Furthermore, as exemplified in (13), na appears to be positionally free in correlative constructions:

3 Notice that na here cannot be interpreted either as negating the non-finite verb korte or as negating the finite verb cay. The following, however, are fine sentences in MB:

i. kar SONge dEkha korte cay na ?

ii. kar SONge dEkha na korte cay na ?
(13) a. ami je boiguli bujhi na, Seguli tomake debo
   I rel books understand not, those to-you will-give
   ‘I will give you the books that I do not understand’

   b. ami je boiguli na bujhi, Seguli tomake debo
   I rel books not understand, those to-you will-give
   ‘I will give you the books that I do not understand’
   (from Van der Wurff, 1989)

The distribution of na, is summarized in (14):

(14) i. Main finite clauses, je -clauses: V + na
   ii. Conditional clauses (jodi / -le )/non-finite clauses : na + V
   iii. Correlatives: (na) + V + (na )

From (14), it is clear that the behavior of na does not fully follow the pattern in (1ii). Obligatorily, in conditional clauses and, optionally, in correlative constructions, the placement of na shows exception to a general postverbal pattern.

2.4 Historical change: from Old to Modern Bengali

Another dimension of the problem arises when we consider the historical data. In Old Bengali (roughly until the 18th century), negation of main finite clauses was preverbal.4 Example (15a) is given in Sen (1958); (15b) and (15c) are taken from a Bengali Grammar by Halhed published in 1778.

(15) a. dudha majhe lada achante na dekhai
   milk in-between cream — not seen-EMP
   ‘cream is not seen (even) when (it is there) in milk’
   (in Sen, 1958)

   b. na jani ki hOeno raja judhiStir
      (I) not know what happened (to) —
      ‘I know not what is become of Raja JoodheeShteer’

---

4 Sen (1958): “One of the main points on which Modern Bengali differs from the pre-Modern is the position of the negative particle. In Modern Bengali it comes immediately after the finite verb and is final in the sentence (...) In Old Bengali the negative particle na is never used as the last word in a sentence, even when the verb is suppressed.” (p.100)
c. ke bole OnOngo Ongo dekha na jae
   who says formless form ‘seeing’ not goes
   ‘who says that the figure of Love is not to be seen?’
   (in Halhed, 1778)

All the examples above are cases of sentential negation where the inflected
verb is negated with na in preverbal position. In MB, for these examples to
be grammatical, na would have to be postverbal.

3. Syntactic Negation: Licensing of NPIs and Inner Island Effects

In Bengali, syntactic negation is expressed with the uninflected negative
particle na. In this section, we show that na is a scopal element that can
both license negative polarity items (NPIs) and interact with other scopal
elements such as wh-phrases.

The examples in (7) and (8), repeated here as (16ab) show cases of
postverbal sentential negation with na:

(16)  a. Se bhat khae na
      he rice eat not
      ‘he does not eat rice’

      b. ami Sunechi je Shyam aste parbe na
         I heard that Shyam to-come will-be-able not
         ‘I heard that Shyam will not be able to come’

In its ability to license NPIs, na contrasts with O-, the prefix for lexical
negation in Bengali. (17ab) show both types of negation can appear in
different structures and convey essentially the same meaning. In (17a), O-
negates the adjective predicate bhOdro; in (17b), na negates the finite verb
hObe:

(17)  a. Ram O-bhOdro hObe
      Ram un-civilized will-be

      b. Ram bhOdro hObe na
         Ram civilized will-be not

There is a subtle difference in interpretation, however, and this has further
syntactic consequences. The prefix O- for lexical negation cannot license
NPIs; na, on the other hand, can license NPIs as the following examples
show:
(18)  a. *amar mone hOe je kOkhon Ram bhOdrO chilo
to-me feeling is that ever Ram civilized was
'I have the feeling that Ram ever was civilized'

b. *amar mone hOe je kOkhon Ram O-bhOdrO chilo
to-me feeling is that ever Ram un-civilized was
'I have the feeling that Ram ever was un-civilized'

c. amar mone hOe je kOkhon Ram bhOdrO chilo na
to-me feeling is that ever Ram civilized was not
'I have the feeling that Ram never was civilized'

The NPI kOkhon ('ever') must be licensed by a negative head. In (18a) there
is no such negative head, this explains the ungrammaticality of the
sentence. Evidence that this is the case comes from the fact that Sob SOmoe
('always') in place of kOkhon gives a grammatical sentence:

(19) amar mone hOe je Sob SOmoe Ram O-bhOdrO chilo
to-me feeling is that always Ram un-civilized was
'I have the feeling that Ram always was un-civilized'

As shown in (18b), the negative prefix O- cannot license the NPI, the result
is an ungrammatical sentence for the same reason as (18a). However, in
(18c) the syntactic negator na is a licenser for kOkhon. In section 3, after
discussing the recent proposal for Negation Phrase, we show how
licensing of kOkhon by na takes place.

Another syntactic difference between na and O- is that na, unlike O-,
interferes with extraction of adjunct wh-phrases.5 (18) shows the blocking
effect of na:

(20)  a. Ram kaeno bole [je Shyam ekhane aSbe]?
Ram why says that Shyam here will-come
'why does Ram say that Shyam will come here?'

i. why-say
ii. *why-come

5 The fact that negation interferes with extraction of adverbial elements
and that it does not affect extraction of arguments was noticed by Ross
(1983).
b. Ram bole [je Shyam kaeno ekhane aSbe] (ki) ?
Ram says that Shyam why here will-come (Q)
‘does Ram say why Shyam will come here?’
i. *why-say
ii. why-come

c. kaenoijkl [Ram ti bole [je Shyam tk ekhane aSbe]] ?
why Ram says that Shyam here will-come
‘why does Ram say that Shyam will come here?’
i. why-say
ii. why-come

d. kaenonkl [Ram ti bole na [je Shyam tk ekhane
why Ram says not that Shyam here
aSbe]] ?
will-come
‘why doesn’t Ram say that Shyam will come here?’
i. why- not say
ii. *why-come

The sentences in (20) all involve a matrix CP projected by the verb
bole (‘say’) and an embedded CP for the verb aSbe (‘come’). In (20a), the
‘question’ word kaeno is in situ and it can only question the higher verb
bole. In (20b), kaeno is also in situ but in the lower clause, therefore, it only
questions the lower verb aSbe. (20c) and (20d) show extraction of kaeno to
the left. As a result, (20c) is ambiguous between a reading where kaeno
questions the higher verb and one where it questions the lower verb.
However, (20d) is unambiguous: the intervening negative head (na) blocks
interpretation of kaeno by which it questions the lower verb. In the
literature, these have been identified as ‘inner island effects’. In section 5.4
we discuss Rizzi’s (1990) account of such effects and how his proposal can
explain the data presented in this section, in terms of NegP.

We have, thus, seen in this section that na, unlike O-, has a syntactic
status: it can license NPIs and shows blocking effects with respect to
raising of adjunct wh- phrases.

4. Previous Accounts and the Proposal for NegP

4.1 Previous Accounts

Previous studies on Bengali negation have focused either on the historical
change in the position of na (cf. Sen, 1958, Singh, 1976) or on synchronic
Sen (1958) discusses the historical development of *na* from Old to Modern Bengali and places the change from preverbal to postverbal *na* in the mid 18th century. Singh (1976) discusses several non-negative uses of *na* and suggests that “the surface V+NEG order is of recent, perhaps non-Indo-Aryan origin”. With respect to historical change in the position of *na*, Singh concludes that Bengali is still in a transitional phase of a historical change and suggests that ‘areal pressure’ from Dravidian languages could have caused Modern Bengali to differ from other Indo-Aryan languages in the position of negation.

With respect to the facts about negation in Modern Bengali, Wen (1979) proposed that “the deviant placement of the negative particle in the subordinate clause is due to the presence of a particular semantic feature in such a clause”(246); more specifically, she proposed that “the feature [+condition] is responsible for the placement of NEG in preverb position”(252). However, as we have shown previously, there are data demonstrating that not every case of preverbal negation involves subordinate clauses or ‘conditionality’ (e.g., refer to examples (11 and 12)).

A more recent proposal for the position of *na* in MB is that by Van der Wurff (1989). Van der Wurff (VDW) argues that *na* is a morphological particle base-generated with the verb in a position left-adjointed to V^0_. From this position, *na* can either (i) raise with the verb from V^00_ to I^0_, or (ii) remain behind when the verb raises to pick up inflection, in which case it can be left-adjointed to other projections. In VDW’s proposal, postverbal *na* results when *na* (generated left-adjointed to V) raises with the verb to I^0_.

This is shown in (21):

(21)

Following Jackendoff (1969), VDW claims that at LF the negative particle must occupy a position c-commanding IP. VDW proposes that “at LF *na* moves to a position marked [+neg], if there is one; otherwise it must adjoin to IP.” (VDW: 189). At LF, if C^0_ is empty, C^0_ can take [+neg] features; as a result, *na* raises to C^0_ from the [NEG+V+T] complex in I^0_.

```plaintext
(21)
```

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```
The main problems that we see with this account are both diachronic and synchronic. First, it is not clear what motivates raising of *na* with *V*. Also, it is not apparent how the surface *V + NEG* order in main clauses comes about: how can *na* 'surface' in the right periphery (i.e., in postverbal position) if it is base generated left-adjointed to the verb and, presumably, it is the most embedded constituent in the complex? VDW states that "after *V-to-I, na* cannot move out any more from the resulting complex of *na, V* and *I* (with *na* eventually surfacing at the right-hand boundary, except in one or two cases..." (VDW:190). This is clearly problematic.

From a diachronic point of view, this account does not seem to readily allow for a plausible explanation of historical change in the position of negation from OB to MB: why, for example, would *na* in OB not surface in postverbal position?

It is not immediately clear how this proposal could solve these problems.

4.2 Negation Phrase (NEGP) and its position in the structure

It has been proposed that sentential negation involves generating a functional projection. This has been referred to as Negation Phrase (NegP) in Pollock (1989) and Ouhalla (1990) or as Sigma Phrase (ΣP) for emphatic assertion and negation in Laka (1990). In Bengali, *na* would occupy the head position NEG

\[
(22)
\]

\[
\text{NegP} \quad \text{Spec} \quad \text{Neg'} \quad \text{XP} \quad \text{Neg}^0 \quad \text{na}
\]

With respect to the position for NegP in the structure, it has been proposed that the position that NegP occupies with respect to TP is parameterized across languages (Laka, 1990, Ouhalla, 1990). The hierarchical order in (23a) where NegP is below TP but above VP has been argued for by Laka (1990) for English and by Takahashi and Whitman (1992) for Korean and Japanese. The structure in (23b) where NegP is above TP and VP has been argued for by Suer (1991) for Spanish, by Laka (1990) for Basque and by Belletti (1990) for Italian.

\[
(23) \quad \text{a. } \text{VP} > \text{NEGP} > \text{TP} \\
\text{b. } \text{VP} > \text{TP} > \text{NEGP}
\]
A different proposal to account for language variation in the position of negation is given in Foley (1994) and López (1993). Instead of parameterization of NegP with respect to TP, they propose that the hierarchy of functional categories is fixed across languages and that NegP (or ΣP) always dominates TP, as in (23b). Language variation is explained by parameterization with respect to the possibility of the verb or auxiliary to raise to T⁰ before LF, in which case it would then raise to Neg⁰.

With respect to the position of na in Bengali, notice it would appear that (23a) can straightforwardly account for the facts in OB but not for those of MB, while (23b) could account for the facts in MB but not for those of OB.

In the next section, we present our proposal to account for synchronic and diachronic variation in the position of na.

5. Our Proposal: ΣP and NegP

5.1 Word Order and ±Tense

Consider the following examples:

(24) a. amar mone hOe je kolkatate thake Bangla na
    I-GEN feel is that Calcutta-in stay-3P Bengali not

    Sekha OSombhob hObe
    learn(INF) problem be-FUT-3P

    'I think that, being in Calcutta, not to learn Bengali will be a problem'

b. amar mone hOe je kolkatate thake Bangla
    I-GEN feel is that Calcutta-in stay-3P Bengali

    Sekha OSombhob hObe na
    learn(INF) problem be-FUT-3P not

    'I think that, being in Calcutta, to learn Bengali will not be a problem'

---

c. amar mone hOe je kolkatate thake Tamil na
   I-GEN feel is that Calcutta-in stay-3P Tamil not

   Sekha OSombhob hObe na
   learn(INF) problem be-FUT-3P not

   'I think that, being in Calcutta, not to learn Tamil will not be a
   problem'

In (24a) and (24b), na occurs only once; in (24c) na occurs twice. The
embedded phrase in (24a) and (24b) can be paraphrased as in (25):

(25) ... living in Calcutta:

   ... it will be a problem not to learn Bengali, i.e.:
   a. it will be necessary to learn Bengali
   b. it will not be a problem to learn Bengali

Clearly, there is a difference in interpretation between (24a) and (24b).
Syntactically, in (24a), na negates a non-finite verb (Sekha, 'to learn') while
in (24b), na negates a finite verb (hObe, 'to be'). This is responsible for
the difference in interpretation. Notice that this tense - non-tense distinction
not only appears to be responsible for the different readings but also
patterns with a specific position of na with respect to the verb: in (24a) na
appears in preverbal position; in (24b), na appears in postverbal position.

Based on this contrast, we propose to distinguish 'sentential' negation
(as in (24b)) from 'constituent' negation (as in (24a)). We propose that the
relevant difference between the two is not the position that na occupies
with respect to the verb but what constituent it is that na negates in each
case. Our specific proposal is the following: in cases of constituent
negation na negates a Verb; in cases of sentential negation, na negates
Tense. In other words, constituent negation constitutes negation of a
lexical head (V⁰) while sentential negation constitutes negation of the
[V+T] complex in T⁰. How the two differ, structurally, will be made clear
in the next section.

It is clear that only one sentential ('clausal') negator can occur per

---

7 Notice that a more subtle distinction can be made where (24b) can take
two readings, one involves an event in process, the other an event with no
action involved:

i. learning Bengali will be easy     (event in process: action involved)

ii. it will not necessarily be a problem to learn Bengali
    (event: no action involved)
clause. Example (24c), with two occurrences of na in the embedded CP, shows that constituent negation and sentential negation can co-occur. This constitutes additional evidence for a distinction between sentential and constituent negation with na.

Additional data that support this distinction come from Dasgupta (1980). Consider examples (26) and (27):

(26) a. ami kono bondhur SONge dEkha korte cay na
    I any friend-GEN with meeting to-do want not
    'I don’t want to meet with any friend'
    (= I want to meet with no friend)

    b. ami kono bondhur SONge dEkha na korte cay
    I any friend-GEN with meeting not to-do want
    na
    'I don’t want not to meet with any friend'
    (=i) I want to meet with at least one friend
    (ii) There is no friend whom I am avoiding

(27) a. amar karo SONge kOtha bolte holo na
    I-GEN anyone with word to-say was not
    'I didn’t have to talk with anyone'

    b. amar karo SONge kOtha na bolte holo na
    I-GEN anyone with word not to-say was not
    'I didn’t have to not talk with anyone'
    (=i) it didn’t become necessary to avoid all talking
    (ii) it didn’t become necessary to avoid anyone in particular

The glosses, translation and interpretation for examples (26) and (27) are those given in Dasgupta (1980). It is clear from the possible interpretations provided that the (b) examples are ambiguous while the (a) examples are not. Following the criteria discussed above by which we can identify sentential negation from constituent negation (i.e., presence vs. absence of tense and word order) we find that in the (a) examples we have instances of sentential negation, while in the (b) examples we have both sentential and constituent negation. Examples (26) and (27) also involve a negative polarity item (NPI): kono bondhur, 'which friend' in (26) and karo, 'anyone' in (27). This also shows that either constituent negation or sentential negation can license an NPI. It is this capability that is responsible for the ambiguity in (26b) and (27b).
5.2 Constituent Negation vs. Sentential Negation

Assume that lexical projections are generated as a consequence of lexical insertion of a predicate in an \( X^0 \) node. Functional projections, on the other hand, are generated with non-overt features in \( X^0 \) and are either (i) dependent on inflectional morphology on lexical heads (we adopt the feature-checking mechanism in Chomsky, 1992), or (ii) dependent on another functional projection that hosts a lexical head.\(^8\) Functional projections of the first kind will respect, in the hierarchy, the order of affixation in the \( X^0 \) head (e.g. AspectP, TenseP, AgreementP). An example of the second kind is \( \Sigma P \), a functional projection that carries the features for emphatic assertion or negation, as in Laka (1990); however, in our proposal there is no lexical insertion in \( X^0 \) and projection of \( \Sigma P \) depends on TenseP; \( \Sigma P \) is generated by TenseP,\(^9\) so that it always immediately dominates TP.

With respect to negation, our first assumption gives two possibilities for the position where the negative marker is generated in a language: (i) with the verb under \( V^0 \) (together with other verbal affixes), if it is affixal, or (ii) the negative marker can head its own lexical projection, if it is non-affixal. What about the predicational status of lexical heads? Negation appears to be 'in between' lexical and functional categories in this respect. It is clear that the inflectional morphology on the verb has no predicational status. On the other hand, the verb will take an argument structure and if necessary it will project a 'shell' structure (cf. Larson, 1988) to theta-mark an external argument. Sentential negation is scopal and can be defined as a function in logico-semantic terms; however, it can also be interpreted as a predicate in the sense that it takes a proposition as its argument. In any case its predicational status is clearly different from that of the verb (e.g., it does not involve theta-marking). In this paper we will distinguish it from the predicate verb by referring to Neg\(^0\) as a P' position (non-predicate position), while \( V^0 \) is a P position (predicate position).

If a language takes the first option for lexical insertion of negation (i.e., if the negative marker is an affix), then our second assumption requires a functional projection for feature-checking of the negative affix. The

\(^8\) A third case would be that where a functional projection is always generated as determined by UG (a matrix CP) or, alternatively, it can be generated by a lexical head that dominates it (e.g., an embedded complement or adjunct CP with a complementizer in \( C^0 \)).

\(^9\) An alternative view is that \( \Sigma P \) 'selects' for TP. In any case, \( \Sigma P \) must immediately dominate TP, in sentential negation. This coheres with the proposals in Foley (1994) and López (1993).
projection for ‘checking’ of negative features is $\Sigma P$. In our proposal, sentential negation results when $\Sigma P$ is projected, and this will only happen when $TP$ is projected. If $TP$ is projected (when the verb is inflected for tense), then $\Sigma P$ is projected and the negative affix will raise with the verb to $T^0$ and then to $\Sigma^0$ for feature-checking.

If a language takes the second option for lexical insertion of negation (i.e., if the negative marker is not affixal), then our second assumption requires, as before, the functional projection $\Sigma P$. If $TP$ is projected (when the verb is inflected for tense) then $\Sigma P$ is projected: (i) the verb will raise to $T^0$, and (ii) the negative affix will raise to $\Sigma^0$, for feature-checking. We will motivate this movement in terms of a ‘Relativized’ Head Movement Constraint (HMC) argued for in Baker and Hale (1990).

Independently of where the negative marker is base-generated (with $V$ in $V^0$ or as head of Neg$P$), when $TP$ is not projected, as a consequence $\Sigma P$ is not projected either and we do not have sentential negation. The outcome will be grammatical as constituent negation.\(^{10}\)

In our proposal, $\pm$ projection of $TP$ and, as a consequence, $\pm$ projection of $\Sigma P$, allows us to structurally distinguish sentential negation from constituent negation. These functional projections occur in sentential negation; in constituent negation, only the lexical projection Neg$P$ is generated by the negative marker.

With respect to constraints on head movement, we adopt the proposal in Baker and Hale (1990) to relativize the notion of Antecedent-government (cf. Rizzi, 1990) to distinguish between lexical and functional categories so that a lexical category is not a potential Antecedent-government (A-governor) for the trace of a functional head and also a functional category is not a potential A-governor for the trace of a lexical head:

(28) **Potential antecedent governor** (in Takahashi and Whitman 1992, adapted from Baker & Hale 1990:252)

$Z$ is a potential antecedent governor for $Y$, $Y$ in an $X^0$ chain, iff

a. $Y$ is a lexical $X^0$ category and $Z$ is a lexical $X^0$ category

b. $Y$ is a functional $X^0$ category and $Z$ is a functional $X^0$ category

(29a) shows how (28) rules out movement to $X^0$ from $Y^0$; (29b) shows when this movement is allowed:

---

\(^{10}\) A potential problem that we see here is to explain why feature-checking in $\Sigma P$ is only required at the sentence-level when $TP$ is generated, i.e., in finite clauses.
(29) a. 

\[
\begin{array}{c}
\text{XP} \\
\text{ZP} \\
\text{YP} \\
\text{Y}^0 \\
\end{array}
\]

\[
\begin{array}{c}
\text{X}^0 \\
\end{array}
\]

b. 

\[
\begin{array}{c}
\text{XP} \\
\text{ZP} \\
\text{YP} \\
\text{Y}^0 \\
\end{array}
\]

We propose to further relativize the HMC to differentiate not only lexical categories from functional categories but also to differentiate predicate vs. non-predicate lexical heads. We propose to relativize the definition of potential antecedent governor with respect to lexical chains in terms of P and P-bar positions (a parallel can be established with A and A-bar positions for Spec-to-Spec movement).

(30) **Potential antecedent governor**

Z is a potential antecedent governor for Y, Y in an X^0 chain, iff

a. Y is a lexical X^0 category and Z is a lexical X^0 category, where:

i. X^0 is a P position (for Y and Z)

ii. X^0 is a P' position (for Y and Z)

b. Y is a functional X^0 category and Z is a functional X^0 category

(31a) shows one example when (30a) rules out movement to X^0 from Y^0; (31b) gives an example where this movement is allowed:
Having presented our general proposal, we turn again to the facts in Bengali.

In Bengali, *na*, being non-affixal, occupies a head position (Neg⁰) and generates a lexical projection: NegP (in both constituent and sentential negation).

5.2.1 Constituent Negation: *na* in Neg⁰ negates VP

In accord with our proposal, the structure in (32a) will be that for constituent negation in Bengali; the syntactic derivation involved is shown in (32b):

(32)  

a. VP > NEG > ASPP

b.
Na heads the lexical projection NegP, and negates VP. The verb is non-finite, therefore, no TP nor ΣP is generated. V₀ raises past Neg₀ to Aspect₀. The output is preverbal negation of a non-finite verb with na. Raising of V₀ to Asp₀ is permitted by (30) given that na in Neg₀ is in a P’ position, and therefore does not qualify as a potential antecedent governor for the trace in V₀ (a P position).

With this structure for constituent negation, we account for those cases of preverbal na in MB, that we repeat here as (33) - (35):

(33) negation of a ‘verbal noun’ (non-finite verb):

\[ \text{amar mone hOe je kolkatate thake Bangla na} \]
I-GEN feel is that Calcutta-in stay-3P B. not

\[ \underline{\text{Sekha OSombhob hObe}} \]
learn(INF) problem be-FUT-3P

‘I think that, being in Calcutta, not to learn Bengali will be a problem’

(= (24a))

(34) conditional clauses with -le:

\[ \text{tumi Sekhane na gele, ami jabo na} \]
you there not go-if, I will-go not

‘If you do not go there, I will not go’

(= (9a))

(35) non-finite -le:

a. \[ \text{ami kono bondhur SONge dEkha na korte cay} \]
I any friend-GEN with meeting not-to-do want

\[ \text{na} \]
not

‘I don’t want not to meet with any friend’

(= (26b))

b. \[ \text{amar karo SONge kOtha na bolte holo na} \]
I-GEN anyone with word not-to-say was not

‘I didn’t have to not talk with anyone’

(= (27b))

In (33-35), where na occurs in preverbal position, the verb it negates is in a non-finite form. We take these to be cases of constituent negation.

5.2.2 Sentential Negation: na in S₀ negates TP

We have proposed that sentential negation involves both a lexical projection NegP projected immediately above VP (i.e., na takes VP as its complement) and a functional projection ΣP, immediately dominating TP. The structure we propose for sentential negation is that in (36a); the syntactic derivations involved are shown in (36b):
Sentential negation results when *na* negates TP. The verb raises from \( V^0 \) to \( T^0 \); *na* raises from Neg\(^0\) to \( \Sigma^0 \). Movement is constrained as in (30): raising of \( V \) to \( T^0 \) is allowed since Neg\(^0\), a P'-position is not a potential antecedent governor of the trace in \( V^0 \), a P-position; raising of *na* to \( \Sigma^0 \) is allowed since \( T^0 \) is a functional head and the trace of *na* is the trace of a lexical head. The output is negation of a finite verb with *na* in postverbal position.

With the structure in (36) we account for postverbal *na* in Modern Bengali:

(37) a. **Se bhat khae na**
    he rice eat not
    'he does not eat rice'  (= (16a))

b. **ami Suneci je Shyam aste parbe na**
    I heard that Shyam to-come will-be able not
    'I heard that Shyam will not be able to come'  (= (16b))

c. **amar mone hOe je kOkhon Ram bhOdrO chilo na**
    to-me feeling is that ever Ram civilized was not
    'I have the feeling that Ram never was civilized'  (= (18c))

These are all cases of sentential negation.

We have claimed that all instances of postverbal *na* are instances of sentential negation, and that preverbal negation, which patterns with non-finite verbal forms are instances of constituent negation.
5.3 Remaining problems: jodi clauses and correlatives

Two problems remain: (i) in conditional clauses with jodi - tahole the verb inflects for tense but negation is preverbal; and (ii) in correlative structures na can appear in preverbal or postverbal position.

Addressing (i), we suggest that the preverbal pattern in jodi clauses (as in (39)) developed on the basis of the preverbal pattern for conditional clauses of the V-le type (as in (38)):

\[(38)\]  
\[
a. \text{tumi Sekhane na gele, ami jabo na} \quad (= (9)) \\
you there not go-if, I will-go not \\
'If you do not go there, I will not go'  
\]

\[
b. \text{tumi Sekhane gele na, ami jabo na} \\
\]

\[(39)\]  
\[
a. \text{tumi jodi Sekhane na jao, (ta hole) ami jabo} \\
you if there not go, (then) I will-go \\
na \\
not \\
'If you do not go there, I will not go'  
\]

\[
b. \text{tumi jodi Sekhane jao na, (ta hole) ami jabo na} \\
\]

Conditional clauses with -le can only take preverbal negation since no TP is projected that could generate a ΣP immediately dominating it for NEG to move into. This is a case of constituent negation. We propose that preverbal negation in jodi -clauses patterns as in -le type conditional clauses as a result of a process of 'analogy' that caused speakers of Bengali to identify the preverbal pattern as that for negation of conditional clauses (recall Wen's (1979) proposal that preverbal position of na is triggered by the feature [+conditional]). In other words, we suggest that preverbal na with jodi is not grammatically determined (though it is grammatically constrained: preverbal position of na is structurally possible since raising to Σ⁰ can take place at LF instead of in the syntax, cf. section 4).

Correlative structures show that na can occur preverbally or postverbally:

\[(40)\]  
\[
a. \text{ami je boiguli bujhi na, Seguli tomake} \\
I rel books understand not, those to-you \\
debo \\
will-give \\
'I will give you the books that I do not understand'  
\]
b. amī je boiguli na buṣhi, Seguli tomake debo
   I rel books not understand, those to-you will-give
   'I will give you the books that I do not understand'

With respect to correlative structures, we agree with Van der Wurff (1989) when he says that “as it is to be expected in an area of grammar undergoing a historical change, there is also a category showing variation” (187). We note that historical change from sentential negation with preverbal na to sentential negation with postverbal na is fairly recent, and as pointed out by Sen (1958) and Singh (1976), Bengali is still in a transitional phase of a historical change. What needs to be explained is why embedded clauses appear to be the most ‘conservative’ and have less propensity to change.

5.4 Licensing of NPIs and Blocking of Adjunct wh- Extraction

In section 2, we presented data that show na is a scopal element that can license NPIs and has blocking effects for extraction of adjunct wh-phrases. Here we briefly discuss the mechanism by which na licenses NPIs and shows blocking effects.

We adopt the licensing mechanism for NPIs in Haegeman (to appear) and Haegeman and Zanuttini (1990), referred to as the NEG Criterion:

(41) NEG Criterion (Haegeman, to appear):

 i. A NEG Operator must be in a [Spec- Head] configuration with an X0 [NEG]
 ii. An X0 [NEG] must be in a [Spec- Head] configuration with a NEG Operator

NPIs are negative operators that will raise to SpecNEG to fulfill the NEG Criterion.

The NEG Criterion can apply at two places in the structure: NEGp and Σp, this is why both constituent negation and sentential negation can license NPIs.

An explanation for the blocking effects of negation (refer to 18e), is given in Rizzi (1990). He proposes that the negative marker is an A' specifier since it “blocks A'-chains involving adjuncts” (18); i.e, Spec-to-Spec movement of an adjunct wh-phrase to an A'-specifier (SpecCP) is ruled out by an intervening negative operator. Rizzi points out that his proposal “presupposes an analysis of the negative marker as an A'-specifier on the appropriate level(s) of representation” and notes that “this assumption is in conflict with recent proposals according to which the negative marker heads an autonomous projection, NegP” (18).
We propose that the NEGP approach to the blocking effects of negation is not problematic: what the data in (18) suggest is that a non-overt operator (the null counterpart for overt negative operators such as NPIs) occupies the SpecNEG position and intervenes in Antecedent-government by the adjunct *wh*-phrase of its trace:

(42)

(42) shows improper movement due to a violation of Relativized Minimality (cf. Rizzi, 1990).

5.5 From OB to MB: An in situ strategy vs. a movement strategy

As we saw in section 1.3, sentential negation in Old Bengali shows a preverbal pattern which contrasts with the postverbal pattern for sentential negation in Modern Bengali:

(43) a. **dudha majhe lada achante na dekhai** (= (15))
   milk in-between cream — not seen-EMP
   'cream is not seen (even) when (it is there) in milk'

   (in Sen, 1958)

b. **na jani ki hOeno raja judhiStir**
   (I) not know what happened (to) —
   'I know not what is become of Raja JoodheeShteer’

c. **ke bole OnOngo Ongo dekha na jae**
   who says formless form to-see not 'goes'
   'who says that the figure of Love is not to be seen’

   (in Halhed, 1778)

To account for historical change from sentential negation with preverbal *na* in OB to sentential negation with postverbal *na* in MB, we have the
following proposal: structurally, the same syntactic constraints hold—ΣP is a functional projection generated above TP (refer to (36)); we account for the different patterns by suggesting that OB, unlike MB, had an in situ strategy for negation. Here we establish a parallel with the WH system and the proposed parameterization between languages with a wh-in-situ strategy (e.g., Japanese and Korean) and languages with a wh-movement strategy (e.g., Spanish and English).

Having adopted Chomsky's (1992) proposal for feature-checking and having proposed to extend it to negation, we account for the difference between OB and MB by claiming that negative features can be checked in the syntax (Neg-movement strategy) or at LF (Neg-in situ strategy). In OB negative features were checked at LF, in MB negative features are checked in the syntax.

Non-grammatical factors such as "areal pressure" from Dravidian languages (where sentential negation is postverbal) could have caused MB to pattern differently from other Indo- Aryan languages (where sentential negation is preverbal), as suggested in Sen (1958), Singh (1976) and Klaiman (1987). Syntactically, this was possible by resorting to Neg-feature-checking in the syntax, i.e., by adopting a movement strategy for negation.

We believe historical change can be motivated by extra-grammatical factors (language contact, pragmatic, social factors); however, these are possible contributing factors but not by themselves sufficient to trigger change in the position of a constituent over time.11

6. Conclusions

In this paper we have provided an account for synchronic and diachronic facts on the position of negation in Bengali.

We have proposed (i) to extend the feature-checking mechanism in Chomsky (1992) to sentential negation and (ii) to further relativize the HMC as in Baker & Hale (1990) so that it distinguishes P-positions from P'-positions for lexical heads.

We accounted for preverbal and postverbal negation in MB, by differentiating constituent negation from sentential negation; we

11 It is possible that once historical change in the position of a constituent takes place, the constituent will be (i) reanalyzed, if the position it now occupies in the syntax is different categorically from the one where it was originally generated (as has occurred with respect to negation in many Romance languages, cf. Schwegler, 1988), or (ii) it could now be base-generated under the host-projection—this would be another case of reanalysis over time.
accounted for historical change from preverbal sentential negation in OB to the postverbal pattern in MB by proposing that OB had an in situ strategy (negative features where checked at LF) while MB has a movement strategy (negative features are checked in the syntax, before LF).

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References


Evidence for NegP and Object Shift in German

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1. Introduction

Pollock's (1989) NegP hypothesis, under which negation projects its own maximal projection outside the verb phrase, has been shown to have considerable explanatory possibilities for languages as diverse as French, Hindi (Mahajan 1989), and Basque (Laka 1990). This hypothesis predicts that the sentential negator will either precede or follow all the elements of the verb phrase, since NegP dominates VP, and its elements will thus occur outside the elements of the verb phrase. This prediction holds true in the following example from English:

(1) \([_{IP} \text{Peter} [_{i} \text{did}] \text{NEG} \text{[NEG} \text{not}] \text{[VP set the cup on the table}]])\]

In German, the NegP hypothesis is problematic because the sentential negator seems to occur between elements of the verb phrase, as seen in:

(2) a. weil \(\text{er die Tasse nicht auf den Tisch stellte}\)
   because he the cup not on the table put

   b. \([_{CP} [_{C} \text{weil}] \text{[IP er} \text{[VP die Tasse} \text{neg} \text{[NEG nicht]} \text{auf den Tisch} \text{[t}] \text{[stellt]}])\]
   table put

This placement of the negative has traditionally led to the assumption that negation in German as a V' adjunct, allowing it to occur between objects and other VP elements. However, if we wish to assume that the NegP hypothesis holds universally, as suggested by Laka (and others), then how can we reconcile the German facts with this hypothesis?

In this paper, I will show that the NegP hypothesis can explain the

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facts in German, and that the appearance of the negative *between* the elements of the verb phrase can be accounted for by case-driven movement of the objects out of the verb phrase to a specifier position above NegP. Object movement can also account for other puzzling word order facts in German, namely the appearance of PPs between the phrase-final verb and its objects, seemingly violating strict adjacency between the verb and its objects. Finally, this analysis will lend support to recent proposals for phrase structure which posit movement of objects to an Agr(O) phrase to receive case under Spec-head agreement, cf. Mahajan (1989), Chomsky (1992), among others.

This paper is organized as follows: First I will present the problematic data, then I will discuss how previous analyses of negation in German fail to account adequately for the distribution of sentential negation. Next I will present an analysis of how NegP in conjunction with Object Shift can account for the facts with regard to negation placement in German. Finally, I will discuss some unresolved issues related to the analysis of Object Shift.

1.1 Problematic data

As mentioned earlier, negation in German seems to occur within elements of the verb phrase. Specifically, the sentential negator *(nicht) ('not') occurs to the right of NP objects, as seen in (3)-(5),

(3) weil die Lehrerin den Schüler nicht sieht 
   because the teacher the pupil not sees

(4) weil er seinem Vater nicht dankte 
   because he his father not thanked

(5) weil der Lehrer dem Schüler das Buch nicht gab 
   because the teacher the student the book not gave

However, sentential negation occurs to the left of all other elements of the verb phrases, as can be seen in the examples from (6)-(12). (6) and (7) show that sentential negation precedes all verbal elements, both non-finite and finite, in subordinate clauses.²

² I will generally use subordinate clauses to illustrate the position of negation. Finite main clauses show, of course, V2 effects (cf. Koster (1975)), which mask the position of the finite verb relative to the negative, as seen in the following pair of sentences:

(i) a. Ich *sah* meinen Vater *nicht* 
   I saw my *father* not
(6) weil der Lehrer den Schüler nicht gesehen hat
    because the teacher the student not seen has
(7) weil sie ihrem Vater nicht gedankt hat
    because she her father not thanked has

Sentence negation also occurs to the left of predicate adjectives and predicate nominals, as seen in (8) and (9).

(8) weil ich gestern abend nicht krank gewesen bin
    because I last evening not sick been am
    'because I wasn’t sick last night'
(9) weil meine Mutter nicht Ärztin werden konnte
    because my mother not doctor become could

Finally, sentence negation precedes all PPs (both complements (10) and adjuncts (11)) and other adverbials (12):

(10) daß du die Tasse nicht auf den Tisch gestellt hast
    that you the cup not on the table put have
(11) daß die Kinder nicht im Garten gespielt haben
    that the children not in-the garden played have
(12) weil ich das Auto nicht langsam gefahren habe
    because I the car not slowly driven have

These distribution facts have led traditional grammarians to categorize negation in German as an “adverb of manner”:

“Within the entire sentence field, nicht functions basically like an adverb of manner. It thus moves toward the end of the sentence field, but precedes other modifiers of manner (since it is a very general term), the modifiers of place, prepositional objects, predicated complements, and the second part of the predicate.”

(Lederer (1969:585))

Within the GB framework, this has usually been translated into the assumption that sentential negation is a VP adverb, probably a V' adjunct, as shown in the structure in (13b) (e.g., Webelhuth (1989)).

b. weil ich meinen Vater nicht sah
    because I my father not saw
2. Previous Analyses

2.1 nicht as a V' adverb

While assuming negation is a VP adverb makes it possible to account for the word order facts, nicht still does not behave like other VP adverbs. For example, nicht cannot be reordered with respect to objects (cf. the discussion in section 3.1 below), it precedes adverbs of place, and it follows adverbs of time.

(14) weil ich gestern das Buch nicht auf den Tisch gelegt because I yesterday the book not on the table put

habe have

If negation is reordered with respect to these elements, it becomes constituent negation rather than sentential negation. These facts indicate that the negative has special, fixed status in the sentence. Positing a NegP for German would explain this fixed position of negation in the sentence: NegP occupies a fixed structural position in the sentences, just like other
functional phrases such as TP or CP. Another objection to an analysis of negation as a V’ adjunct is that negation cannot separate the verbal elements within the VP, but rather it must appear adjoined to the highest VP.

(15) a. [CP Wir [c₀ werden [Neg nicht] [VP reisen] we will not travel [VP können] [∅ t₁]]
   can ‘we will not be able to travel’

b. *[CP Wir [c₀ werden [IP [VP reisen [Neg nicht]] we will travel not [VP können] [∅ t₁]]]
   can

If sentential negation were a V’ adjunct, then it should be able to separate the elements in the VP. Furthermore, if sentential negation were VP internal, then it should be able to be topicalized in VP topicalizations. However, if nicht is topicalized in with a VP topicalization, then there is only a reading of constituent negation, and not a reading of sentential negation.

(16) Nicht singen wollte er (sondern Klavier spielen)
    not sing wanted er (rather piano play)
    ‘He didn’t want to sing, but to play the piano.’

Under a NegP hypothesis however, the failure of negation to appear inside complement VPs is easily explained: NegP dominates all VPs and takes VP as its complement.

Given these problems with analyzing negation as a V’ adjunct, and the fact that NegP provides a solution for these problems, a NegP analysis of German negation is preferable.

2.2 NegP in German

Ouhalla (1989) proposes that the overt negative element can be either the specifier of NegP or the head of NegP, or both as found in French ne pas. There is good evidence in German that nicht is not a head: nicht does not block verb raising out of the verb phrase, as happens for example in Finnish, where the negative blocks further raising of the verb, as seen in:
(17)  
\begin{align*}
  \text{a. } & \text{Minä puhu-n suomea.} \\
  & I \text{ speak-1sg Finnish} \\
  \text{b. } & \text{Minä e-n puhu suomea.} \\
  & I \text{ neg-1sg speak Finnish.}
\end{align*}

In contrast, German verb movement to \( C^0 \) (seen through V2 structures, cf. Koster (1975), den Besten (1983)) occurs with both lexical and auxiliary verbs, regardless of the presence or absence of negation, e.g.,

(18)  
\begin{align*}
  \text{a. } & \text{Ich habe meine Schwester nicht gesehen.} \\
  & I \text{ have my sister not seen} \\
  \text{b. } & \text{Ich sah meine Schwester nicht.} \\
  & I \text{ saw my sister not}
\end{align*}

Assuming that Neg is a specifier, there are still two logical possibilities for the location of the negative. The specifier could be leftward (19a) or rightward (19b), as shown below:

(19)  
\begin{align*}
\text{a. Leftward Specifier}
\end{align*}

\[ 
\text{CP} \\
\text{C'} \\
\text{C}^0 \\
\text{IP} \\
\text{I'} \\
\text{I}^0 \\
\text{NegP} \\
\text{nicht} \\
\text{Neg'} \\
\text{Neg}^0 \\
\text{VP} \\
\text{V'} \\
\text{V}^0 \\
\text{NP} \\
\text{V}^0
\]
While the option of a rightward specifier (19b) seems marked, it has been suggested for German, cf. Grewendorf (1990), as discussed in the next section. In Section 3, I will propose an analysis of German negation using a leftward specifier as in (19a).

2.2.1 Grewendorf (1990)

Grewendorf (1990) assumes a NegP analysis for German, but he assumes that negation in German occupies a leftward specifier. Thus, according to Grewendorf, the underlying structure of negative sentences would be: SOVneg. The major problem for such an analysis is the fact that nicht precedes all verbs, in German, both tensed and untensed, e.g.,

(20) a. weil der Lehrer den Schüler nicht gesehen hat
   because the teacher the student not seen has

   b. Wir werden nicht reisen können.
   we will not travel can
   ‘we will not be able to travel’

In order to achieve this word order of nicht+verb, Grewendorf claims that all verbs (infinitives and participles) raise from V⁰ to TNS, where they gain either the infinitival or the participial affixation.

However, there are a number of problems with such an analysis. Even if the verb raises past the position of nicht, Grewendorf’s account fails to
explain why predicate adjectives, predicate nominals, prepositional phrases and other adverbials occur to the right of the negative phrase. In order to explain the word order facts with respect to PPs and other non-case marked elements, Grewendorf could assume obligatory extraposition of all non-case marked elements. These extraposed phrases could adjoin higher than the negation, thus giving the proper word order.

(21) weil [TP ich [VP die Tasse t_FP]] [NegP [Neg nicht] [FP auf den Tisch] [T stellte]]
because I the cup not on the table put

Even positing extraposition is inadequate however. While extraposition might be plausible for PPs under a version of Case resistance (e.g., Stowell 1980), there is no motivation for such a stipulation for predicate nominals and predicate adjectives. An even more serious problem is the fact that this “extraposition” is extremely local. The extraposed elements can only move the next highest maximal projection above the negative. If they were to move further they would appear after the finite verb in subordinate clauses, which is clearly ungrammatical in German:

(22) *weil [TP er [VP den Kuchen gestellt] [T hat]] auf den Tisch because he the cake set has on the table

Thus, in order to achieve the proper word order, it would have to be specified that extraposed elements could only adjoin to the nearest maximal projection. Clausal extraposition, unlike this hypothesized extraposition of predicate elements, does appear after the finite verb in embedded clauses, showing that extraposition of clausal elements is adjunction to the highest maximal phrase.

(23) weil er mir sagte, daß ich heute morgen gehen sollte because he me told, that I this morning go should

3. Analysis

3.1 Position of nicht

Given the difficulties associated with analyzing nicht as a V' adjunct (Section 2.1), as well as the difficulties associated with Grewendorf's (1990) analysis of nicht in a rightward specifier, I will pursue another approach. I propose that nicht is located in a leftward specifier as indicated
in the structure (25) below.

(24) weil der Kranke die ganze Nacht nicht geschlafen hat  
     because the sick-one the whole night not slept has

(25)

This analysis will allow us to easily account for the placement of the negative with respect to PPs, predicate nominals and adjectives, and verbs and verbal particles. Note that I have placed NegP above VP but below TP in these structures. I have done so because time expressions such as die ganze Nacht (‘the whole night’) (cf. (24)), which are considered to be IP (TP) adjuncts, usually occur before negation. This indicates that negation is located directly above VP and below TP.

The structure in (25), with nicht in the rightward specifier position will explain the position of nicht preceding PPs, predicate adjectives and predicate nominals and non-finite verb forms, but it leaves the position of the objects unexplained. Placing the negative in a specifier position predicts the word order: NEG OBJECT VERB, as illustrated in the following example.
(26) weil er nicht meinen Vater besucht hat
    because he not my father visited has

While this order is not ungrammatical, it has the reading of constituent
negation, not sentential negation. Thus, it has the reading in (27a), but not
the reading in (27b).

(27) a. Er hat nicht meinen Vater besucht, sondern meine
    he has not my father visited, rather my
    Mutter
    mother
    ‘He did not visit my FATHER rather my MOTHER.’

b. Sie hat nicht meinen Vater besucht, sondern angerufen
    she has not my father visited, rather called up
    ‘She did not VISIT my father, rather CALLED (him) up.’
    (Word order does not allow this reading.)

Sentential negation can only be expressed with the order where the
negative follows the object NP, as seen in:

(28) weil er meinen Vater nicht besucht hat
    because he my father not visited has

The sentential negation reading occurs when the object is to the left of the
negation, while orders with negation preceding the object give a marked,
constituent negated order. However, these facts conflict directly with the
structure in (25), where nicht is in the rightward specifier position of NegP.
Instead of preceding the objects as predicted, the negative occurs after the
objects.

Note, however, that negation occurs in an “unpredicted” position only
with respect to objects. Other VP elements, such as prepositional phrases,
predicate nominals, and predicate adjectives appear following negation as
predicted by NegP. Interestingly, all of the elements which follow
negation in German are elements that do not require case, while elements
needing case (the objects) must precede the negative. Indeed, I suggest
that this distribution is not coincidental, rather it reflects movement of the
object to receive case. This is the notion that I will explore in the next
section.

3.2 Object Shift in German

Because only elements needing case are required to appear to the left of
negation, I propose that object movement in German is motivated by Case: Objects move out of the verb phrase, to a position to the left of the negative in order to get case. Case is the most likely candidate for the trigger for object movement because only objects precede negation, while other, non-Case bearing elements such as PPs, predicate adjectives and complement verbs follow negation even if they are subcategorized for. The position that the object moves to must be higher than negation, and it must be a position where the objects can receive Case. \(^3\) Spec of Agr (O), (cf. Mahajan (1989)), located above NegP and VP, can provide a landing site for object movement.

Chomsky (1992) has suggested that all objects move out of the verb phrase to Agr(O)P in order receive case (either at LF or before), and this idea is receiving increasing cross-linguistic support. \(^4\) Recent work on by Jonas and Bobaljik (1992) and Bures (1993) has shown that movement to Spec of Agr (O) can account for the phenomenon of Object Shift in Icelandic. Furthermore, the idea that objects move out of the verb phrase (for Case or other reasons) has recently been discussed for a number of different languages, e.g., Hindi (Mahajan 1990), Bambara (Koopman 1990), and for derived objects (Travis 1991), Yoruba (Dekydsporter 1991), and Dutch (Vanden Wyngaerd 1992).

Given this wide ranging theoretical and cross-linguistic support for movement to Spec of Agr(O), it seems reasonable to assume that the position of objects with negation in German reflects movement of these objects to Spec of Agr(O). I suggest that this object movement occurs in all German sentences. In sentences with negation, the negative in the specifier of NegP clearly marks this movement of the object. If the object occurs following negation, then the only way to interpret the object following negation in (40b) is if the object and the negator both are in Spec of Agr(O). In order for both negation and the object to be in Spec of Agr(O),

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\(^3\) Grewendorf (1990) argues against an account with object movement for German because these objects show no indication of having been scrambled. They do not, for example license parasitic gaps. Thus he sees no empirical motivation for such a movement. However, movement to Agr \(^0\) is not scrambling, but rather movement to an A-position, motivated by case reasons. Vanden Wyngaerd (1989) has shown for Dutch that object shift obeys the locality constraints associated with A-movement and has the binding properties of A-movement. These arguments carry over to German as well.

\(^4\) See Chomsky (1992) and Jonas and Bobaljik (1993) for a discussion of why movement of the object over the VP internal subject position does not violate Relativized Minimality.
they must form a constituent. This indeed seems to be the case, because objects preceded by negation receive a reading of constituent negation, as seen in the examples in Section 3.1. Sentential negation thus provides a reference point by which we can see the movement of the objects (henceforth Object Shift), as demonstrated by the structure below.  

(29) Structure for object moved phrases

While movement to Spec of Agr(O) has been proposed to explain Object Shift in Icelandic, there are several important differences between the Scandinavian Object Shift and German Object Shift. First, Object Shift in Icelandic seems to be optional with the object able to appear on either side of negation with no appreciable difference in meaning:

5 For the present, I will limit the examples (and discussion) to definite objects. I will discuss some ideas concerning indefinite objects and object movement in section 4.
Object Shift in German is not optional, as was discussed in Section 3.1. If the object follows negation in German, as in the (b) example below then it is perceived as constituent negation, not sentential negation.

German Object Shift differs from Scandinavian Object Shift in another important way as well. Scandinavian objects can shift only when there is movement of the main verb.

In German objects must shift, regardless of whether or not the main verb moves.\(^6\)

\(^6\) It could be argued that the non-finite verb moves string-vacuously to a higher projection, thus enabling the object to shift with both finite and non-finite verbs in German. I can see no evidence for this in German. However, even if that were to be the case, the basic difference between German and Icelandic remains: German has Object Shift with all verbs, while Icelandic only has Object Shift when there is no auxiliary or modal present.
b. weil Johann nicht DAS Buch gekauft hat
   because J. not that book bought has
   'because J has not bought that book (but a different one)'

Negation provides the clearest evidence for Object Shift in German. With adverbs other than negation, objects can appear either preceding or following the adverb, making Object Shift appear optional.

(34) a. weil ich gestern meinen Vater besucht habe
      because I yesterday my father visited have

b. weil ich meinen Vater gestern besucht habe
   because I my father yesterday visited have

I suggest that the variability of the object with respect to other adverbials is due to short distance scrambling of the objects across these adverbs, rather than true Object Shift, which is shown by movement across the negative. The possibility for scrambling in addition to Object Shift would predict that both Object Shift and scrambling are possible in a given sentence. In other words, the object could scramble to a position further than the position preceding the negative. This prediction is borne out, as can be seen in the following example.

(35) a. weil ich gestern meine Mutter nicht besuchte
      because I yesterday my mother not visited

b. weil ich meine Mutter gestern nicht besuchte.
   because I my mother yesterday not visited

In (a) the object has shifted to the position just preceding negation. In (b) the object has scrambled further, to the position preceding the temporal adverb.

Evidence to support this distinction between movement across adverbs and movement across negation comes from Barbier's (1993) study of the acquisition of scrambling in Dutch. Dutch, like German, has obligatory Object Shift around negation, but optional movement around other adverbs. In an elicited imitation task, Barbier found that Dutch children rarely "unscrambled" the order: Object Neg to the order: Neg Object, but that they did "unscramble" the order: Object Adverb to the order: Adverb Object significantly more often. In other words, Dutch children were much more willing to "unscramble" objects that were moved around adverbs than they were to "unscramble" objects that were moved around negation. This suggests that there are significant differences between the two types
of object movement, differences which warrant further investigation.\footnote{Further support for object movement comes from the placement of prepositional phrases and time expressions relative to the objects. Time expressions and prepositional phrases, like negation, appear in between the verb and its objects in unscrambled sentences, as seen in:}

\section{Problems for Object Shift}

\subsection{Indefinite object NPs and negation}

In the previous section, I suggested that Object Shift in German is obligatory for all objects in German. Indefinite NPs pose a potential problem to this analysis. Unfortunately, it is impossible to fix the position of indefinite objects with respect to sentential negation because these objects take determiner-like negation, rather than sentential negation, as seen in the following example:

\begin{itemize}
\item[(36)] weil er kein Auto repariert hat because he no car repaired has
\end{itemize}

Negation with \textit{nicht} in these contexts is judged either ungrammatical or as constituent negation, negating the number \textit{ein} (‘one’), e.g.

\begin{itemize}
\item[(37) a. *] weil er nicht \textit{ein} Auto repariert hat, (sondern zwei) because he not a car repaired has, (but two)
\item[—contrastive reading, with negation of \textit{ein}, ‘one’]
\end{itemize}

As German is assumed to be an SOV language, the expected unmarked word order is S PP O V, with the object adjacent to the verb, as seems to be the case in other head final languages such as Japanese (Yoshida, p.c.). Instead, the German unmarked word order seems to be one with the prepositional phrases adjacent to the verb, and the object as the outside element. If objects move however, this apparent inconsistency in word order can be explained: The object has moved out of the verb phrase and into Spec of Agr(O).
b. weil er ein Radio nicht repariert hat, because he a radio not repaired has, 
(sondern zerstört) (but destroyed) 
—contrastive or negation of the verb are the only readings possible.

Furthermore, indefinite objects must follow definite objects in double object constructions, suggesting that definite objects shift while indefinite objects do not.

(38) a. weil ich das Buch einem Schüler gegeben habe because I the book-acc a pupil-dat given have 
b. weil ich dem Schüler ein Buch gegeben habe because I the pupil-dat a book given have

Indeed, in Icelandic Object Shift is not possible with indefinites, but only with definite objects:

(39) a. Hann las ekki bækur he read not books 
b. *Hann las bækur ekki he read books not

Because German indefinites must take the constituent negator kein, it is impossible to tell whether they have moved across negation in negated sentences.

(40) a. weil ich dem Kind kein Buch gegeben habe because I the child no book given have 
b. ?weil ich dem Kind nicht ein Buch gegeben habe, because I the child not ONE book given have, 
sondern zwei rather two 
c. weil ich dem Kind ein Buch nicht gegeben habe, because I the child a book not GIVEN have, 
sondern geliehen rather loaned
When indefinites appear with nicht, as in (40b) and (40c), they receive either a reading of constituent negation on the object (40b), or of constituent negation on the verb (40c). This indicates that nicht in these sentences is not the sentential negator, but rather forms a constituent with either the indefinite object or the verb. Determining the structure of indefinites with respect to negation is made more difficult by the fact that the position of objects with respect to adverbs other than negation is much more free (cf. (34) above). This means that we cannot use the position of other adverbs (time, manner) to reliably judge whether or not indefinite objects have moved in German, and we must look elsewhere for evidence that indefinite objects do or do not move.

While Icelandic Object Shift suggests that indefinite objects do not undergo movement to Spec of Agr(O), we have already shown in Section 3.2 that German object shift differs considerably from Icelandic Object Shift. Thus I am not willing to take a parallel with Icelandic Object Shift as evidence that German indefinite objects do not move. Indeed there are two pieces of evidence which suggest that indefinite objects in German do actually move outside the VP. The first piece of evidence comes from the position of indefinite objects relative to PPs. As noted in footnote 8, German is assumed to be an SOV language, and the expected unmarked word order is S PP O V, with the object adjacent to the verb. However, the unmarked word order is for objects to precede PPs, regardless of whether or not the objects are definite or indefinite:

\[
(41) \quad \begin{align*}
\text{a. weil ich das Mädchen im Garten gesehen habe} \\
\text{because I the girl in-the garden seen have}
\end{align*}
\]

\[
\text{b. weil ich ein Mädchen im Garten gesehen habe} \\
\text{because I a girl in-the garden seen have}
\]

Second, Wayne Harbert (p.c.) has suggested to me that the failure of indefinite objects to appear with the adverbial nicht, as seen in (40b) and (40c) above, suggests that these indefinite objects have shifted. Note that these negated objects contrast with English negation, where sentences containing both definite and indefinite objects are negated with not.

\[
(42) \quad \begin{align*}
\text{a. He has not repaired the car} \\
\text{b. He has not repaired a car}
\end{align*}
\]

In requiring the constituent negator kein, indefinite objects in German behave similarly to indefinite subjects in English. In English, the negation for sentences with indefinite subject is the constituent negator no, as seen in:
(43) a. No car was repaired
    b. A car was not repaired

The only interpretation of (43b) is one in which there is a contrastive reading of the verb, e.g., a car was not repaired, but junked. This indicates that the not in these sentences is not sentential negation, but rather constituent negation of the verb.

I wish to argue that the oddness of the (43b) indicates the existence in English of a general prohibition against indefinites being outside the domain of negation in syntax. There seems to be a constraint which allows indefinites that are inside the domain of negation, but disallows indefinites that are outside the domain of negation. I have formulated this condition below.

(44) **Condition on indefinites and negation**

Negation must c-command indefinites.

This constraint holds can account for the oddness of indefinites subjects with sentential negation in English. The subject in (43b) is not c-commanded by negation, and hence is ruled out by the condition in (44). Constituent negation, as in (43a), saves the construction by placing the negation in a position where it will c-command the indefinite.

The constraint in (44) can also account for the oddness of indefinite objects with the sentential negator nicht in German. As was seen in (40), the unmarked negation with indefinite objects is with the constituent negator kein (`no'). The incompatibility of indefinite objects with sentential negation is due to two competing requirements, namely the need for German objects to move to Spec of Agr(O) and the constraint in (43). In (40b), the sentence is odd because the object follows negation. The object is required to shift to Spec of Agr(O) to receive Case. If the object has moved to Spec of Agr(O) to receive Case, then it should have moved over negation. The only way to interpret the object following negation in (40b) is if the object and the negator form a constituent in Spec of Agr(O). This results in the object in this position receiving a reading of constituent negation. In (40c) the indefinite object has shifted over negation, but it then places the indefinite outside the domain of negation, violating the constraint in (43). Thus, the preferred reading of (40c) is constituent negation on the verb. The only way for negation and the indefinite to co-exist is to use constituent negation with kein, as in (40a), thereby placing the indefinite inside the domain of negation.

The obligatoriness of Object Shift and the condition on negatives and indefinites in (44) predicts that all indefinite objects will be negated with
the constituent negator *kein*, because they must move outside the scope of negation. This indeed holds true, as both the direct and indirect objects take *kein*. If they are combined with *nicht*, then a constituent negation reading results, as discussed for (40).

(45) a. Ich habe das Buch keinem Kind gegeben.
    I have the book no child given

b. Ich habe dem Kind kein Buch gegeben.
    I have the child no book given

c. ?Ich habe dem Kind ein Buch nicht gegeben.
    I have the child a book not GIVEN, (rather ...)

d. ?Ich habe dem Kind nicht ein Buch gegeben.
    I have the child not A BOOK given (rather ...)

Furthermore, this analysis also predicts that indefinite objects inside of PPs, which do not move, will be well formed. These objects do not need to move because they receive Case from the preposition. Since they remain *in situ* in the VP, they remain within the scope of negation, and can be negated with the sentential negator *nicht*. This prediction is also borne out, as seen in the following examples.

(46) weil wir nicht mit einem Wagen nach Bonn
    because we not with a car to Bonn

    gefahren sind
    traveled are

Diesing and Jelinek (1993) argue that an indefinite can appear on either side of negation, with sentential readings, if the indefinite is modified as in:

(47) a. ...weil ich nicht eine einzige Katze gestreichelt habe
    since I not a single cat petted have
    ‘...since I have not petted a single cat.’ (no cats petted)

b. ...weil ich eine einzige Katze nicht gestreichelt habe
    since I a single cat not petted have
    ‘...since there is a single cat that I have not petted’

(Diesing and Jelinek (1993:5))

They claim that the difference between (a) and (b) here is not due to constituent readings but to the scope of the negation. Furthermore, they
claim that movement of the objects out of the VP has to do with semantic interpretation rather than case marking or other reasons. However, several of the German speakers I consulted with seem to get a constituent reading for the (a) sentence. I am not sure that *eine einzige*, ‘a single’ is truly indefinite in the same way that *eine ‘a* is.

If Diesing and Jelinek are correct, then the object movement in German is more complex than Case motivation alone. However, I still think there is evidence for obligatory Object Shift in German. A theory that derives movement of the object solely for semantic interpretation misses the generalization discussed above that English indefinite subjects and German indefinite objects pattern alike in requiring constituent negation rather than the adverbal negator. The obligatoriness of the constituent negator indicates that the indefinite objects in German have moved outside the scope of the sentential negator, giving further support for the obligatoriness of Object Shift in German. So while semantic interpretation clearly plays a role in the placement of German objects, movement for Case reasons also carries explanatory weight.

4.3 Double Object Constructions

Double object constructions constitute a potential problem for this analysis, because both objects precede negation:

(48) weil sie dem Studenten das Buch *nich* gegeben hat
because she the student the book not given has

If the negation precedes either object, it is seen as constituent negation, and not as sentential negation.

(49) a. weil sie dem Studenten *nich* DAS Buch gegeben hat
because she the student not that book given has

b. weil sie *nich* DEM Studenten das Buch gegeben hat
because she not that student the book given has

If objects move to a unique Spec of Agr(O) position for case reasons, as I have suggested, that should allow only one object to precede negation. In these constructions however, there are two maximal phrases that precede the negative. Note that double object constructions are problematic for any theory which proposes movement to Spec of Agr(O) for case reasons because Spec of Agr(O) provides only a single landing site but there are two XPs that move. This raises several questions. First, do both objects move, and if so, where do they move to, and do they move together? Second, is it possible that there are two Agr(O) positions, one for each
object, and thus maintain the idea that the objects move to a unique Agr(O) position? If this is the case, then what is the internal structure of double object constructions that would allow for two Agr(O) positions?

While I cannot provide an answer these questions, I shall explore several possible constructions for double objects which would enable me to maintain the analysis of NegP and Object Shift in German. One possible solution is the notion that double object constructions are small clauses, as proposed by Kayne (1984) and more recently by Ottósson (1992). Under this analysis, both objects would as a small clause move to Spec of Agr(O). Another possible analysis is that double objects are part of a complex VP structure ("VP-Shell"), as suggested by Larson (1988) or Travis (1991). Under this analysis, only one object would move across negation, and negation would occur within this VP complex. A third option, suggested by Collins and Thráinsson (1993) would be to analyze double object structures as complex, bi-clausal structures. Under this analysis, each object would move to its own Agr(O), and negation would be associated with the lowest clause.  

4.2.1 Double objects as Small Clauses

Kayne (1984) and Ottósson (1991, 1992) propose a structure similar to small clauses for double object constructions, e.g.,

\[(50)\]

\[
\begin{array}{c}
\text{NP}^* \\
\text{NP1} \quad \text{NP2}
\end{array}
\]

In this construction, both objects are part of the same phrase, with NP2, the direct object, as head of the construction. Since both objects need case, the entire small clause will move to the specifier of Agr(O) in order to receive case. Case will be assigned directly to the head of the phrase, and the indirect object (in Spec of NP*) will receive case through Exceptional Case Marking.

While analyzing double objects as a small clause will explain why negation cannot occur in between the objects in double object

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8 This seems counterintuitive because negation is interpreted as taking scope over the entire bi-clausal structure. Collins and Thráinsson posit this structure for Icelandic, which has a different distribution of double objects with respect to negation, and they do no discuss the problem of how negation associated with the lower clause could take scope over the entire clause.
constructions without triggering a reading of constituent negation, there are some difficulties with this analysis. First, he parts of the double object construction can be separated by adverbs other than negation, as in:

(51)  a. weil ich dem Kind gestern das Buch gegeben habe
      because I the child yesterday the book given have

  b. weil ich das Buch gestern dem Kind gegeben habe
      because I the book yesterday the child given have

  c. weil ich dem Kind das Buch gestern gegeben habe
      because I the child the book yesterday given have

As I suggested above, the order in (51c) derives from scrambling. If the objects in a double object construction must be shifted together across negation (A movement) and can be scrambled together (A’ movement), this raises the question of why both objects cannot be topicalized together, since they can move together to Spec of Agr(O). Topicalization of both objects is strikingly bad:

(52)  *Dem Mann die Bücher hat sie gegeben.
      the man the books has she given

It is true that topicalization of small clauses in general is bad, e.g,

(53)  a. We considered Chris a fool.

  b. *Chris a fool we considered.

---

9 Collins and Thráinsson (1993) point out that for Icelandic, while it could be argued that the small clause can undergo A-movement to Spec of Agr(O) but be prohibited from undergoing A’-movement to Spec of CP, this argument fails because double objects cannot undergo passive movement. In Icelandic, which is SVO, the ungrammatical order: [CP Adv [C V-aux (passive)] [IP IO DO] [VP V-main]], shows that double objects cannot undergo passive movement. However, in German, which is SOV, the Adv V-aux( passive) IO DO V-main is grammatical.

(i) weil gestern der Maria das Buch gegeben wurde
      because yesterday Maria the book given was

This is because the direct object can be interpreted as the complement to the verb in an OV order while the indirect object can be interpreted as being located in Spec of IP. Thus it is impossible to employ this test against a small clause analysis of double objects in German.
However, the fact that both objects can be scrambled suggests that they are not a constituent moving together, but that each object is a constituent in its own right and able to undergo A' movement on its own. Furthermore, there is cross-linguistic evidence that double objects do not behave as small clauses, cf. footnote 10. These facts indicate that double objects are most likely not a small clause and that another solution for the movement of both objects is preferable.

4.2.2 Double Objects in an Extended VP

Another current analysis of double object constructions is as part of an extended VP, such as proposed by Larson (1988), and modified by Travis (1991). Larson proposes a VP "shell", where an upper VP with an empty head selects for a complement VP, as in:

(54)

```
         VP
          \\V'
           /\
          v^0
          e
          NP
          Mary
          v^0
          give
          NP
          the book
```

In this structure, the indirect object occupies the Specifier of the lower phrase, and the direct object is the complement to the verb. One possible analysis for object shift with double object constructions using this structure would be to posit an Agr(O)P between VP1 and VP2, similar to the structure proposed by Travis (1991) or Bures (1993). Bures posits a structure for double objects with a functional category between VP1 and VP2. This sort of structure could explain the facts of German negation in the following way: The NegP would select for the lower VP, and the lower (direct) object would move past negation into the lower Spec of AGR(O), and the higher (indirect) object would move into the higher Spec of Agr(O). This would yield the order: IO DO negation, as shown in the structure (55) below.
Under this analysis, both objects move separately, so we do not need to explain why both objects cannot be topicalized. The position of the objects is independent from one another, and so only one object can be topicalized. This derivation would explain why negation must follow both objects and cannot appear between them. The negative occurs below the indirect object, and only the direct object moves past negation. Placing negation at any other point in the structure would require it to be constituent negation.

However, this analysis is conceptually unappealing for several reasons. The first is that a structure such as (55) requires movement of the verb from a lexical category to a functional category to a lexical category again. This type of non-uniform chain should be ruled out under Chomsky

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10 Collins and Thráinsson (1993) note that a structure such as that proposed by Bures crucially requires two cycles: one for the indirect object to move and one for the direct object to move. If this were not the case, the indirect object would have to cross the direct object in the lower Spec of Agr(O), creating a minimality violation. (See Collins and Thráinsson (1993) for further discussion).
(1991) or Li (1990). Furthermore, there is no principled reason why NegP should be associated with the lower of the two VP clauses, since the negative is interpreted as having sentential scope.

### 4.2.3 Biclausal Analysis

A third possible analysis of double object constructions is the one posited by Collins and Thráinsson (1993) for Icelandic and English. Collins and Thráinsson find fault with previous analyses and suggest an extension of the structure in (55) where double objects represent a biclausal structure. A biclausal analysis avoids the problems with cycle associated with Bures' analysis and the problems of topicalization associated with small clauses. Furthermore, if NegP is located in the lower of the two clauses, this will explain why negation follows both objects in the double object construction (using the same logic as for Bures (1993)). However, their structure will not explain why the objects cannot be split up by negation, nor why negation needs to be associated with the lower clause. Presumably, negation should be able to occur in either clause.

### 4.2.4 Double Objects with a Single Agr(O)

I would like to suggest that an analysis of double object shift is possible without invoking a second Agr(O)P or a small clause analysis (Harbert and Santelmann (in progress)). While space reasons prevent me from outlining the proposal in full, I believe it holds great potential for solving the dilemma of double object constructions in German. This analysis is based on an analogy with multiple questions. In questions with multiple wh-words, it is assumed that the second wh-element must move to the Spec of CP by LF in order to be able be licensed. Analyses of multiple wh-words (cf. May (1985)) often assume that there is only one CP in the structure; the moved wh-question occupies this position in the syntax, and the second wh-word adjoins to the CP at LF. Thus, if it is possible for a single Spec of CP to license several wh-words, one by in the specifier and one by adjunction, then the same should be possible for double object constructions.

We would like to suggest that the direct object moves to Spec of Agr(O) to be licensed and receives Accusative Case there. The indirect object on the other hand, receives morphological Dative Case from the verb, but still must be licensed by the Agr(O) projection. Since the Specifier of Agr(O) is filled by the direct object, the indirect object adjoins to the Specifier and receives its licensing in the same manner that the second wh-element is licensed in the Spec of CP. This analysis would explains why both objects must precede negation and cannot be split by negation: They have both moved past negation to the Agr(O) projection to
be licensed. However, since the objects both move separately, they scramble or topicalize independently.

5.0 Conclusion

In conclusion, I have argued that there is evidence for both NegP and Object Shift in German. The sentential negator, nicht, is in the specifier of NegP and NegP takes VP as its complement. Objects move in the syntax from the VP, past NegP and into Spec of Agr(O) to be licensed. This indicates that the features of objects that need to be licensed are "strong" in German in the sense of Chomsky (1992). This analysis of the placement of negation in German, with both the NegP hypothesis and Object Shift accounts for the placement of objects and other VP elements with regard to negation. This analysis lends further support to the universality of NegP as a functional category. Furthermore, it also lends support to Chomsky’s (1992) proposal that all objects move to Spec of Agr(O) at some level of representation.
References


Negation And The Features Of Comp

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Of the many interesting aspects of sentential negation in Spanish, the following is particularly noteworthy. Negative polarity items (e.g., nadie ‘nobody’, ninguno ‘nobody/no one’, nada ‘nothing’, among others) display a peculiar behavior in embedded clauses in the subjunctive mood when under certain verbs. Thus, in an example like (1), the postverbal subject is interpreted as equivalent to ‘anybody’ despite its negative appearance, and despite the absence of no ‘not’, the sentential negative morpheme, within its immediate clause.

(1) No quiero que me llame nadie.
    not want-1sg that me(acc) phone(subj) nobody(nom)
    ‘I do not want that anybody phone me.’

Observe that this pattern is contrary to the normal one found in (2). As can be seen, (2a) is out because postverbal NPIs require the presence of no in order to be licensed (cf. Suñer 1991). This requirement is met in the grammatical (2b). On the other hand, preverbal NPIs obviate the presence of overt no; the hypothesis is that the null counterpart of no forms part of the structure of (2c) (cf. Bosque 1980, Laka 1990, Suñer 1991 for details within slightly different proposals), thus licensing is satisfied.

(2) a. *me llama nadie
    me (acc) calls (indicative) nobody (nom)

b. no me llama nadie
    not me calls nobody
    ‘nobody calls me.’

* For their pointed comments and suggestions, I thank two anonymous reviewers. I take full responsibility for all remaining shortcomings.

1 This squib is part of a much larger project on sentential negation in Spanish, cf. Suñer 1991 and 1992. Here I limit myself exclusively to discussion of subject NPIs.

2 I’m simplifying somewhat in an effort to keep to the main point without complicating the discussion unduly.
c. nadie me llama
   nobody me calls
   ‘nobody calls me’

The second peculiarity of (1) is its interpretation. Its ‘anybody’ reading indicates that its scope is marked by the matrix no ‘not’; in other words, it has the wide scope represented in (3).

(3) for no x, I want that x phone me (wide scope)

Given the above, the question arises as to what the scope facts are for a comparable embedded preverbal subject as in (4). Is it interpreted with narrow scope exclusively (cf. (5)), or is it ambiguous between the wide scope reading in (3) and the narrow one in (5)?

(4) No quiero que nadie me llame.
    not want-1sg that nobody me (acc) phone

(5) I want that for no x, x phone me (narrow scope)

This question has been answered differently for different Romance languages. Rizzi (1982: 127) from the vantage point of Italian claims that extraction of the negative element is possible only from postverbal position. His hypothesis is summarized in the following descriptive statement:

(6)  a. *Op₁ ... [S COMP e₁ V ...]
    b. Op₁ ... [S COMP V e₁ ...]

One direct implication of (6) is that Infl is not a proper governor for the preverbal subject position, since it is evident that the contrast in (6) is of the subject/object asymmetry type. Updating the theoretical framework, nowadays we would say that the VP-internal postverbal subject is properly governed by V in Infl, but that the preverbal one is not (under the c-command definition of head government). Hence, the impossibility of (6a) reduces to an Empty Category Principle (ECP) violation.

For Spanish, however, Bosque 1980 already points out the potential problems created by the contradictory readings of the NPIs in sentences like (7).
(7) Es imposible que nadie lo haga.
It is impossible that anybody/nobody do(subj) it.

Since Bosque’s proposal other investigators have independently remarked on the phenomenon under discussion (Piera 1983, Contreras 1983, Sedano 1983). Other ambiguous examples are found in (8).

(8) a. No es aconsejable que nadie me moleste.
not is advisable that nobody me(acc) bother(subj) ‘It is not advisable that nobody/anybody bother me.’
b. Drea no tiene ganas de que nadie la invite.
Drea is not amenable that nobody/anybody invite her.
c. No parecía que nadie le tuviera compasión.
It didn’t seem that nobody/anybody had compassion on him.
d. No quiero que ninguno de tus amigotes se aparezca por casa.
I don’t want that none/any of your pals come to the house.

Today’s advances in terms of the Chomskian theoretical framework, and more specifically, the extension of X-bar theory to all types of categories (including Neg(ative)P and CP) make it possible to provide a satisfactory answer to the ambiguity puzzle facing us. Since the model requires that all elements be licensed, it follows automatically that NPIs (ie, nadie, nada, ninguno, etc.) also need licensing. Since NPI licensing is achieved through negation, the condition is fulfilled in (1), (4) and (8): the matrix clause contains a no that is able to extend its scope over the subordinate clause because of what we may term ‘subjunctive transparency’. However, there is no no in (7) or in (9), even though

3 It is a well-known fact that only a handful of predicates allow the wide-scope interpretation. The one trait they have in common is that they require subjunctive mood in the embedded clause; however, they do not form a coherent semantic class (eg. querer ‘to want’ allows it but not desear ‘to wish’ or preferir ‘to prefer’). This suggests that the process is idiosyncratic to some lexical items/expressions in the contemporary language. The list on which most native speakers agree follows:

(i) querer ‘want’, creer ‘believe’, parecer ‘seem’, sugerir ‘suggest’,
tener ganas de/tener intención de ‘to be willing to’, ser probable/deseable/aconsejable ‘be probable/desirable/advisable’, dudar ‘doubt’

Notice that under this lexical interpretation, any variation in the number of predicates accepted by speakers becomes easily
the sentences are still ambiguous. This creates a problem for NPI licensing.

(9) a. Dudaba que nadie protestara
doubt-3s that nobody/anybody would complain(subj)
al ver las notas.
when seeing the grades
'S/he doubted that nobody/anybody would complain after
seeing the grades.'

b. La organizadora temía que ninguno
the organizer(f) was-afraid that nobody/anybody
llegara antes de las 8.
would arrive(subj) before 8

Until recently, the consensus was that predicates like temer 'be afraid',
dudar 'doubt', (ser) imposible 'be impossible' had inherent negative
features that allowed them to license NPIs. Although this reasoning
might be thought to solve the problem posited by (7) and (9), it still falls
short of explaining the ungrammaticality of examples like those in (10)
(see Laka 1990).

(10) a. *dudaba nada
doubted-3sg nothing
(cf. no dudaba nada
not doubt-3s nothing 'I didn't doubt a thing')

b. *la organizadora temía a nadie
the organizer was afraid of nobody
(cf. la organizadora no temía a nadie
the organizer wasn't afraid of nobody)

If these predicates had negative features, they should be able to license
in a parallel way not only the NPIs that function as subjects of an
embedded clause ((7) and (9)), but also those which function as direct
objects of the verb in (10). That this prediction is not borne out
conclusively shows that the hypothesis of the verbal negative features
is not even descriptively adequate.

The intuition that leads us to the correct solution comes from
another language. This is the advantage of working from a
comparative perspective in which any empirical result becomes not

only a phenomenon particular to language X, but also potentially part of a more encompassing whole: that of universal grammar. Basing herself on generalizations about Serbo-Croatian by Progovac (1991, and previous works), Laka 1990 notices that Basque has a negative complementizer (e)nik (11b-c) different from the complementizer (e)la (11a) used in non-negative environments (examples from Laka 1990):

(11) a. [Galapagoak muskerrez beterik daudela] diote
[Galapagos lizards-of full are-that] they-say
‘They say that the Galapagos are full of lizards.’

b. Amaiaik [inork gorrotoa dionik] ukatu du
Amaia [nobody hated has-that] denied has
‘Amaia denied that nobody/anybody hated her.’

c. ez du Zuriñe k [inor torriko denik] esan
not has Zuriñe [nobody come would-have-that] said
‘Zuriñe has not said that nobody/anybody would come.’

This C_{Neg} serves to license the NPIs inork in (11b), and inor in (11c). This fact provides us with the clue to the solution. If there exist languages that have a complementizer with inherent an overt negative feature, it would not be strange for this feature to be null in some other language(s). Laka 1990 affirms that this is what happens in Spanish, and I will shortly provide additional evidence which confirms Laka’s claim.

But first, consider how the postulation of a negative complementizer for Spanish explains the examples that were giving us trouble (i.e., (7), (9) and (10)) uniformly. Let us assume with Laka that one characteristic of predicates like temer ‘be afraid’, dudar ‘doubt’, imposible ‘impossible’, etc. is that whenever they take an embedded finite clause, the clause must be introduced by a C_{Neg}. In other words, these predicates select for a negative complementizer (and the subjunctive). The implication is that what licenses the NPIs in (7) and (9) is not the predicate by itself but its selected complementizer, wherefrom the grammaticality of these examples. In contrast, when the same predicates select a non sentential direct object, there is no room for such a C_{Neg}; consequently, the NPIs fail to be licensed and examples like those in (10) are ungrammatical. Hence, a single assumption, the existence of a complementizer with abstract negative features, directly explains the apparent conflict created by the data in (7) and (9) on the one hand, and (10) on the other.

Can the negative C^0 contribute in some other way? Yes. C_{Neg} also helps explain the ambiguity of examples of the type found in (4) and (8)
because it provides us with an alternative way of licensing the preverbal subject NPIs in embedded clauses. Let us review how this is achieved. When the NPIs are interpreted existentially, that is, as equivalent to alguien ‘anybody’ or algo ‘anything’, they are licensed by the negative $C^0$ selected by the higher predicate; this makes them have wide scope (the reading represented in (3)). The way this licensing takes place is schematically represented in (12).

(12)  
\[
\begin{align*}
\ldots&\text{no quiero} \quad [C^0 \text{ que}_\text{neg} ] \quad [IP \text{ nadie} \quad \text{me llame}] \\
\ldots&\text{dudo} \\
\ldots&\text{don't want} \\
\ldots&\text{doubt} \\
\end{align*}
\]

This type of licensing has an important consequence. The general hypothesis is that all languages have Comp-trace effects (Rizzi 1982 and 1990, Chomsky 1986). The implication is that extraction of the subject from SpecI leads to ill-formedness because neither $I^0$, nor $C^0$ are sufficiently “lexical” to properly govern the trace that would be left by the extracted subject. To say it in another way, this extraction would produce an ECP violation.\footnote{Recall that in the absence of LF that-trace effects for English wh-in-situ examples (cf, (i)), Lasnik and Saito 1992 claim that the complementizer deletes.}

(13)  
\[
\begin{align*}
\text{Esta es } &\text{la autora } [\text{CP de la que,}] \quad [IP] \text{ varias} \\
&\text{this is the author(f) [ of whom] [ [ several} \\
&\text{traducciones t,] han ganado premios internacionales}\text{] translations t ] have won international prizes]} \\
\end{align*}
\]

Nevertheless, that the negative features make the complementizer lexical enough to be able to properly govern the preverbal subject position can be inferred from the fact that the NPI must move up to the matrix clause at LF to join the no in examples like (4) and (8), so

\footnote{Recall that in the absence of LF that-trace effects for English wh-in-situ examples (cf, (i)), Lasnik and Saito 1992 claim that the complementizer deletes.}

(i)  
\[
\text{who said that who left?}
\]

However, the same could not be maintained for Spanish que ‘that’ in (12), since in this instance the complementizer is ‘contentive’ by virtue of its negative feature.
that it can be read as in (3). The interpretation of (7) and (9) also indicates that the NPI must raise although it is not completely transparent where exactly it lands. One possibility is that after raising to the embedded SpecC where it joins with the negative features of the complementizer (probably instantiated by a null negative Operator because of Spec-head agreement), the complex element continues its upward movement into the SpecC of the matrix.

The second way to legitimate an NPI proceeds as follows. When the NPI has narrow scope, that is to say, when negation only encompasses the subordinate clause, the NPI is licensed by a no without phonetic features which is situated in the head position of the embedded NegP. This phrase is independent of the presence of \( C_{Neg} \). In other words, the embedded clause has its own negation. Schematically, licensing is carried out as in (14).

\[
(14) \quad \text{...no quiero} \quad \begin{cases} 
[C_P [C^0 \text{que}_{neg}] \quad [\text{IP nadien} \quad \uparrow_{NegP \quad \emptyset} \quad \text{me llame}]] \\
\text{...dudo} \\
\text{...don't want} \\
\text{...doubt} 
\end{cases} \quad \text{that nobody calls me}
\]

Although this alternate way to the licensing of a preverbal subject NPI cannot be visibly confirmed in contemporary Spanish due to the ungrammaticality of examples with a preverbal NPI and an overt no 'not' (see (15)), we should be able to find supporting evidence from languages which permit the cooccurrence of a preverbal subject NPI and the morpheme that signals sentential negation.

\[
(15) \quad *nadien \quad \text{no me llamó} \\
\quad \text{nobody not called me}
\]

Actually, we do not need to look far because we find such evidence in a neighboring language, Catalan. Catalan grammarians (eg. Fabré 1984, Badia Margarit 1962, and Solà 1972) remark on the ambiguity of Catalan sentences parallel to the Spanish ones in (7). For example, in (16) the NPI can be interpreted as either 'anybody' or as 'nobody' (example

\[\quad\]

---

5 Here I differ from Laka 1990. She postulates a constituent labelled 'Sigma Phrase' located higher than IP or AgrP.

6 This suggests that whenever both \( C_{Neg} \) and sentential negation in the embedded clause coexist, the latter prevails. This is most likely a consequence of a locality effect.
adapted from Fabrá).7

(16) tinc por que ningú arribi a la festa sense haver avisat
'I'm afraid that nobody/anybody would-come(subj) to the party
without having said so.'

However, when one adds a no to the embedded clause, the sentence
ceases to be ambiguous and the NPI can only be read as equivalent to
'Nobody':

(17) tinc por que ningú no arribi a la festa
'I'm afraid that nobody would not come(subj) to the party

This same pattern is repeated in the following examples:

(18) a. és impossible que ningú ho sàpiga
    it is impossible that nobody/anybody know it

    b. és impossible que ningú no ho sàpiga
    it is impossible that nobody know it

(19) a. el professor dubta que ningú protesti
    the professor doubts that nobody/anybody complain
després de veure les notes
    after seeing the grades

    b. el professor dubta que ningú no protesti després
    the professor doubts that nobody complain after
de veure les notes
    seeing the grades

(20) a. No vull que ningú m' interrompi abans
    I don't want that nobody/anybody interrupt me before
d'acabar
    finishing

---

7 My appreciation to C. Picallo, L. López-Carretero, and N. Díaz-
Insensé for their help with the Catalan data.
b. No vull que ningú no m' interrompi abans
   I don't want that nobody interrupt me before
   d'acabar
   finishing

In brief, the scope ambiguities created by the possibility that certain predicates select for a [+neg] C0 directly explains why NPIs in subject position get two interpretations. Although it is evident that this ambiguity has no phonetic manifestation in Spanish, it still has interpretative repercussions. Comparative syntax provides the concrete evidence missing in Spanish: Basque has the negative complementizer enik which differs from the complementizer used in non-negative environments; this validates the postulation of an abstract C_Neg in Spanish which serves to license NPIs with an existential interpretation (i.e., with wide scope). And recall that the movement of the NPI to the upper clause from preverbal position avoids violating the ECP because the negative features of C0 transform the generally inert complementizer into a proper head-governor. Moreover, Catalan allows the cooccurrence of a preverbal NPI and the sentential negator; this supports the hypothesis that Spanish resorts to a null no to legitimate an NPI with negative interpretation (i.e., with narrow scope).
References


NegP in Korean

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0. Introduction

Korean exhibits two types of negation—short form negation and long form negation as shown in (1) and (2):

(1) Short Form Negation
    Chelswu-ka chayk-ul an ilk-ess-ta.
    Chelswu-Nom book-Acc NEG read-Past-Dec
    ‘Chelswu did not read a book.’

(2) Long Form Negation
    Chelswu-ka chayk-ul ilk-ci an h-ass-ta.
    Chelswu-NOM book-ACC read-NEG NEG ?-PAST-DEC
    ‘Chelswu did not read a book.’

The objective of this paper is to consider several previous explanations about short and long negations in Korean, and to propose an analysis which overcomes their shortcomings.

1. Previous Analyses

There are two major recent proposals about the status of the negative morpheme an: one treats an as an adverb (Kim, 1993); the other proposal assumes that there is a maximal projection, NegP, and an is either under Spec of NegP which branches to rightward (Jung, 1991), or it is the head of the NegP (Park, 1990).

1.1. An as a VP-Adjoined Adverb Rightward

The motivation for analyzing an as an VP-adjoined adverb rightward comes from the fact that Korean has an adverb like cal which appears only in the immediate preverbal position. (3) shows an example.

(3) Chelswu-ka chayk-ul cal ilk-ess-ta.
    Chelswu-Nom book-Acc well read-Past-Dec
    ‘Chelswu read a book well.’

H. Grabois, D. Parkinson, and D. Yeager (eds.),
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This position can be accounted for by analyzing \textit{cal} as a right-adjunct to VP. This analysis can then be extended to the preverbal \textit{an}. (4) shows the D-structure of (1) on this analysis.

(4)

\[
\begin{Tree}
  [TP
    [NP Chelswu]
    [. T'
      [. VP
        [NP chayk]
        [. V ilk]
      ]
      [. T
        [\_ ass]
        [\_ an]
      ]
    ]
  
  [\_ TP]
\end{Tree}
\]

In (4), the main verb \textit{ilk} ‘read’ is raised to Tense because the verb stem cannot stand alone, nor can the tense. This procedure results in the short negation pattern. I neglect the internal structure of VP in the trees in this paper.

Analyzing \textit{an} as an adverb immediately results in problems. In particular, \textit{an} behaves in different ways than adverbs like \textit{cal} do.

As Takahashi and Whitman (1992) point out, while delimiters such as -(\textit{n})un TOPIC and -\textit{to} ‘even/also’ attach to adverbs including \textit{cal}, they do not attach to \textit{an} (Martin 1963:144). Example (5a) and (5b) show this:

(5)  
a. Mary-ka elyewu-n nolay-lul cal-to pulu-n-ta
    Mary-Nom difficult-Adn song-Acc well-also sing-Pres-Dec
    ‘Mary sings a difficult song quite well.’

b. *Mary-ka elyewu-n nolay-lul an-to pulu-n-ta.
    Mary-Nom difficult-Adn song-Acc Neg-also sing-Pres-Dec
    ‘Mary does not even sing a difficult song.’

Another behavior distinguishing \textit{an} from \textit{cal} is that while adverbs can freely occur before or after \textit{cal}, as illustrated in (6a) and (6b), adverbs can co-occur with \textit{an} only before \textit{an}, that is, they cannot occur between \textit{an} and the verb, as shown in (6d).
(6)  
      Cheswu-Nom book-Acc fast well read-Past-Dec  
      ‘Chelswu read the book fast well.’
   

      Cheswu-Nom book-Acc fast NEG read-Past-Dec  
      ‘Chelswu did not read a book fast.’


Another problem with this analysis is that sentences where cal is left- 
adjointed to VP are marginally acceptable, whereas when an is left 
adjointed to VP, the sentence is completely out, as shown in (7a) and (7b). These facts indicate that the analysis grouping cal and an together is 
problematic.

(7)  
      Cheswu-Nom well book-Acc read-Past-Dec  
      ‘Chelswu read a book well.’

      Cheswu-Nom Neg book-Acc read-Past-Dec  
      ‘Chelswu did not read a book.’

Moreover, when a delimiter such as -(n)un TOPIC and -to ‘even/also’ is 
attached after cal in (7a) where cal is before the whole VP, the sentence gets 
much better. However, this is not the case with an in (7b). This is because, 
as mentioned in (5), it is impossible to add delimiters like -(n)un, -to, after 
an; and also because it is anyway impossible to have an before the whole 
VP. This again shows that an is not an adverb like cal.

We have seen that treating an as an adverb causes problems, and an 
does behave in quite different ways than adverbs do. Following Pollock’s 
(1993) account of negation in French and English, a number of researchers 
have analyzed an as part of a NegP which dominates VP in Korean. There 
are two different views as to where an is located in NegP. One is that an is 
a maximal projection, located in the Spec of NegP. The other analysis 
treats an as the head of NegP, Neg0.

1.2. An in the Spec of NegP

Jung (1991) argues that an occupies the Spec, NegP position branching to 
the right hand side, as shown in (8):
The motivation for placing *<i>an</i>* in Spec of NegP branching to the right is as follows: if we assume that *<i>an</i>* occurs in the head position, movement of a verb stem in the short negation would induce a violation of the Head Movement Constraint due to the intervening head governor *<i>an</i>*. If *<i>an</i>* occupies the Spec position, which is an XP position, then no Head Movement Constraint violation results.

Jung claims that the right branching analysis of the Spec of NegP is borne out by the following contrast in the scope interpretation of the Wh-adjunct *ence* in relation to *<i>an</i>* in (9) and (10):

(9)  
\[ \text{Yenghi-ka } ence \text{ ku chaek-ul } sa-ess-tako \text{ malha-ess-ni?} \]  
Yenghi-Nom when the book-Acc buy-Past-C say-Past-Q  
'When did Yenghi say she bought the book?'

LF Representation for (9a):

b. \[[\text{Yenghi-ka } [ t \text{ ku chaek-ul saesstako} ] \text{ malhaessni} ] \text{ ence}]\]  
c. \[[\text{Yenghi-ka } t [ \text{ ku chaek-ul saesstako} ] \text{ malhaessni} ] \text{ ence}]\]

(10)  
\[ \text{Yenghi-ka } ence [\text{ ku chaek-ul saci ani ha-ass-tako}] \]  
Yenghi-Nom when the book-Acc buy not do-Past-C  
malha-ess-ni?  
say-Past-Q  
'When did say that she did not buy the book?'}
(9) is ambiguous with two possible scope interpretations of *ence, that is, matrix or embedded scope, while (10) allows only a matrix scope interpretation.

Jung claims that this contrast can be accounted for through Rizzi's (1990) Relativized Minimality account of antecedent government. (9) shows that since there is no potential A' specifier in the A' chain, two scope interpretations of *ence can be possibly derived. However, if there is a negative element in the embedded clause, LF movement of *ence is only possible from the matrix clause as shown in (10). Therefore, this entails that an is located in a position which blocks the antecedent government in the A' chain, most plausibly, the Spec of NegP.

However, this explanation is suspect. If the embedded scope interpretation is more difficult to obtain in (10c), it seems due to pragmatics. Asking when someone did not buy a book, that is, embedded scope interpretation, is pragmatically rather odd. Only this can explain why way 'why' is more acceptable in the embedded scope interpretation than *ence 'when'. Moreover, if we replace *ence 'when' to way 'why' as in (11) and (12), then both (9) and (10) have both the matrix and embedded scope interpretations.

    Yenghi-Nom why the book-Acc bought-C say-Past-Q
    'why did Yenghi say she bought the book?'

    LF Representation for (11a)

    b. [[Yenghi-ka [ t ku chaek-ul saesstako] malhaessni] woy]
    c. [[Yenghi-ka t [ ku chaek-ul saesstako] malhaessni] woy]

(12) a. Yenghi-ka woy [ku chaek-ul saci ani ha-ass-tako]
    Yenghi-Nom why the book-Acc buy not do-Past-C
    malha-ess-ni?
    say-Past-Q
    'why did say that she did not buy the book?'
LF Representation for (10a)

b. [Yenghi-ka [ t ku chaek-ul saci ani haesstako] malhaessni] 
   woy]
c. [Yenghi-ka t [ ku chaek-ul saci ani haesstako] malhaessni].
   woy]

Thus, Jung's only evidence for Spec, NegP on the right fails. All other 
Specs in Korean are also on the left. We are then motivated to explore 
placing an in Neg⁰, and to find a way to avoid the violation of the Head 
Movement Constraint which the verb movement over an causes.

1.3. An in the Head of NegP

Park (1990) first introduced an analysis where an is a head of NegP, 
extending Pollock's account to Korean negation. The D-structure 
representation of the sentence (1) in this analysis is as shown in (13):

(13)

```
(13)

```

The main verb ilk raises to the Tense node through Agr. The trace left 
under the Agr node, t[V+AGR] is not antecedent governed in (13) since Neg 
is the closer governor for this trace.

Choi (1991) gives an explanation for why it is possible to avoid a 
violation of the Head Movement Constraint. V⁰ moves first to AGR⁰, 
where γ-marking of the verb trace takes place in an extension of Lasnik & 
Saito's (1984) theory of antecedent government. Then, [V+AGR]_{AGR} moves 
to Tense over an. It fails to antecedent govern its trace, but an ECP 
violation is avoided by deletion of AGR at LF; this is permitted because
AGR plays no semantic role. This account follows Chomsky's (1989) account of English negation.

Nakajima (1993) claims that verb movement to tense is possible not over Neg; rather it moves through Neg, more precisely, the whole NegP moves to Tense. Adopting Selkirk's (1982) analysis of word structure, in which X'-theory extends to the word level, and also Cinque's (1993) analysis of English compounds, as shown in (14), Nakajima proposes that Neg⁰ branch to its specifier and Neg⁻¹, and Neg⁻¹ immediately dominate Neg⁻² and its complement. Verb movement to tense is possible in two ways, as shown in (15) and (16). In (15), the verb first moves to Neg⁻², and then the whole Neg⁰ moves up to tense. An in this case can be regarded as a prefix. Alternatively, in (16) the verb first moves to Neg⁻², and it alone moves to tense, leaving its trace in Neg⁻². In this case since the verb trace in Neg⁻² percolates up to Neg⁰, it can be properly governed.

(14)

```
+----+-------------------+
|    | Neg⁰              |
+----+-------------------+
   |                   |      specifier
   |                   | ------- Neg⁻¹
   |                   | complement Neg⁻²
   |                   |          head
```

(15) Nakajima (1993)

```
+----+-------------------+
|    | TP                |
+----+-------------------+
   |                   |      NP
   |                   | ------- T'
   |                   |           Chelswu
   |                   | ------- NegP
   |                   |           T ass
   |                   | ------- Neg'
   |                   |      VP
   |                   |       V'
   |                   |           Neg
   |                   |           Neg⁻¹
   |                   |       Neg⁻²
   |                   |           Neg⁻²
| NP | V | an | Neg⁻¹ | Neg⁻² | ilk |
| chayk | tv |  an |  Neg⁻¹ | Neg⁻² | ilk |
```
Both Choi's and Nakajima's analyses can explain how verb movement to tense is possible without violating the HMC. However, Nakajima's explanation has advantages over Choi's. First of all, if Choi's analysis is correct, we would expect that the same procedure is possible in English, so we would expect to get sentences like *John read not the book*. There are no Neg Islands. But this is not the case. Movement over Neg in English is possible only with auxiliaries. With Choi's analysis, we have to stipulate this language-specific difference between Korean and English. Nakajima's analysis has another advantage. In short negation, voiceless consonants are obligatorily voiced when they are followed by *an*. Since the voicing rule does not apply obligatorily at word boundaries in Korean, this shows that *an* seems to be a prefix attached to the verb, as predicted by Nakajima's analysis.

2. The Long Negation Pattern

Section 2 is devoted to a discussion of long negation. There are basically two possible analyses for the long negation. One proposes the same, or similar D-structures for both the short negation and the long negation, and inserts the dummy verb *ha*, 'do' to support tense in the long negation pattern. The other one holds that, as Song (1967) and Jung (1991) claimed, long negation has a different D-structure from that of short negation, and *ha* is a lexical verb which takes the whole projection containing *ci*.
2.1 Ha as a Lexical Verb, Ci as a Nominalizer (Jung, 1991) / Complementizer (Song, 1967)

Song (1967) claimed that ci is an allomorph of ki, and ki and ci are both complementizers which are in complementary distribution in that the former appears in affirmative sentences whereas the latter appears in negative sentences. He argued that ha in the long negation is not a dummy verb, rather it is a lexical verb which selects a CP headed by ci. The D-structure of (2) is shown in (17).

Jung (1991)'s analysis is similar to Song's. Ci is a nominalizer like ki, and the lexical verb ha- in the long negation pattern selects a DP headed by ci, as shown in (18):

(17)

(18)

Song and Jung's idea seems to be supported by the occurrence of an affirmative counterpart of long negation where ha seems to take a CP or a DP with ki, and by the appearance of accusative case-marking and other delimiters in the long negation pattern just as in its affirmative counterpart. This analogy is shown in (19) and (20).
(19) Chelswu-ka chayk-ul ilk-ki-lul ha-ess-ta.
    -nun
    -to
    -man
    -ya
    -kkaci

    Chelswu-Nom book-Acc read-ING-Acc do-Past-Dec
    Top
    -also
    -only
    -surely
    -even

    'Chelswu did read the book.'

(20) Chelswu-ka chayk-ul ilk-ki-lul an h-ass-ta.
    -nun
    -to
    -man
    -ya
    -kkaci

    Chelswu-Nom book-Acc read-ING-Acc Neg do-Past-Dec
    Top
    -also
    -only
    -surely
    -even

    'Chelswu did not read the book.'

As Song and Jung observed, (19) and (20) look similar, so it might be possible that ci is a complementizer or nominalizer depending on what we regard ki as, and ha in the long negation pattern looks like a lexical verb which takes CP or DP as its complement, and the only difference between -ki and ci is that ci appears in negative sentences.

2.2. Ha as a Dummy Verb, Ci as a Participle

However, if we replace ha with other two place-predicates in (19) and (20), whereas the result of (19), which is shown in (21) is still good, (22), long form negation becomes ungrammatical. This shows that ha in long negation is actually not a lexical verb, but a dummy verb supporting tense. It does not assign any theta role, so the projection ending with ci is not DP nor CP.
    Chelswu-Nom book-Acc read-NM/C-Acc like-past-Dec
    'Chelswu liked to read a book.'

    Chelswu-Nom book-Acc read-ci-Acc Neg like-Past-Dec
    'Chelswu did not like to read a book.'

This claim that ha in (19) is a lexical verb, and ha in the long negation pattern is a dummy verb is supported by some other facts. A piece of evidence comes from the fact that we can passivize (21), whereas if we passivize long negation, the result is bad. This is shown in (23) and (24):

(23) chayk ilk-ki-ka haye-ci-ess-ta.
    book read-C/D-Nom do-Pass-Past-Dec
    'The book was read.'

    book read-ci-Nom Neg do-Pass-Past-Dec
    'The book was not read.'

Another piece of evidence that ha is not a lexical verb in the long negation pattern is as follows: if ha is a lexical verb, we would expect to have -ki (-nun) ha-ta form after ha. With (19), this construction is possible, as shown in (25), but, this is ungrammatical with long negation, as shown in (26). Therefore, ha in the long negation is not a lexical verb:

(25) Chelswu-ka chayk-ul ilk-ki-lul ha-ki-nun
    Chelswu-Nom book-Acc read-C/D-Acc do-C/D-Top
    ha-yess-ta.
    do-Past-Dec
    'Chelswu did read a book.'

(26) *Chelswu-ka chayk-ul ilk-ci-lul an ha-ki-nun
    Chelswu-Nom book-Acc read-ci-ACC Neg do-D/C-Top
    ha-yess-ta
    do-Past-Dec
    'Chelswu did not read a book.'

With the evidence shown so far, we may conclude that ha in the long negation pattern is a dummy, in contrast to Song's and Jung's analysis. And since it is a dummy verb, it cannot assign a theta-role, so chayk-ul ilk-ci cannot be a CP, or DP. Then, our next question is that if it is not a CP or
a DP, then what is it? I propose that ci in the long negation has more or less the status of participle -ing in English. Adopting Kayne's analysis of French, I propose that the projection of participial phrases is AgrOP. The S-structure of the long form negation would be as shown in (27):

(27)

```
TP
  /
 /\
 T'  
  /
 /
NegP  T
  /
 /
Neg'  h-ass-ta
  /
 /
AgrOP  Neg
   /
   /
   AgrO' an
   /
VP  AgrO
   /
NP  V  ci
    /
  chayk-ul  ilk
```

To sum up the discussion about ki/ci and the verb ha, ci is not an allomorph of ki. Rather, ci is like participial -ing in English, selected by an, whereas ki is either a complementizer or a nominalizer like gerundial -ing in English. Ha in (19) is indeed a lexical verb, while ha in the long negation is a dummy which is inserted to support tense.

3. The occurrence of the Honorific Marker Si in Negations

In this section, I discuss the occurrence of the honorific marker si in two forms of negations, and suggest that the appearance of honorific marker si results from the Spec-head agreement in tense.

In the long negation pattern, the honorific marker si can appear with either the lower verb, the upper verb ha, or with both of them. One of the motivations for regarding the projection ending with ci as CP was that it can explain these three cases of occurrence of si since we have two AgrPs: embedded AgrP, and the matrix AgrP. But we have seen that the projection with ci is not CP selected by the verb ha, rather it is VP which is selected by Neg an, and ha is a dummy.
The D-structure I proposed for the negation seems problematic to account for three cases of occurrence of si since it is impossible to have two AgrPs: one AgrP higher up between NegP and TP, and another AgrP dominating VP. To resolve this problem, I propose that si is not in AgrP, and the appearance of honorific marker si results from the Spec-head agreement.

The appearance of the honorific marker can be explained as follows: every verb is unmarked for the [+/- agreement] feature (or [+/-honorific]) in the lexicon, and it is marked in either D-structure, S-structure, or in both, in order to satisfy Spec-head agreement. For example, in the short negation like (28), the verb ilk ‘read’ gets marked as [+agreement] in D-structure to agree with the verb-internal subject apeci ‘father’, and later the verb-internal subject moves to the Spec of TP, and the verb incorporates to Tense. Alternately, it is equally possible that the verb-internal subject moves to the Spec of TP, and the verb also moves to Tense, and agreement marking of the verb occurs in S-structure. And another possibility is that it occurs in both in D-structure and S-structure, and the result would be the same.

(28) apeci-kkyese chayk-ul an ilk-usi-ess-ta
father-Nom ilk-Acc Neg read-Hon-Past-Dec
‘My father did not read a book.’

The feature-marking procedure is more complicated in the long negation since ha is inserted, so we get another verb in S-structure. If feature-marking occurs only once in D-structure, we get the sentence where the lower verb ilk has the honorific marker, as shown in (29). In D-structure, the main verb ilk gets marked as [+ agreement] to agree with the verb-internal subject apeci which is in Spec of VP, in order to satisfy Spec-head agreement.

(29) apeci-kkyese chayk-ul ilk-usi-ci an h-ass-ta
father-Nom book-Acc Neg read-Hon-ci Neg do-Past-Dec
‘My father did not read a book.’

If feature-marking occurs only in S-structure, we get the honorific marker with the higher dummy verb ha. This is shown in (30). In S-structure, since the VP-internal subject moves to the Spec of TP, and ha is inserted to Tense, only the verb ha, but not the lower verb, needs to be marked to agree with Spec of TP where the moved subject is.
(30) apeci-kkyese chayk-ul ilk-ci an h-usi-ess-Ta
father-Nom book-Acc read-ci Neg do-Hon-Past-Dec
  'My father did not read a book.'

If feature-marking occurs both at D-structure and at S-structure, we get si both with lower and upper verbs, as shown in (31).

(31) apeci-kkyese chayk-ul ilk-usi-ci an h-usi-ess-Ta
father-Nom book-Acc read-Hon-ci Neg do-Hon-Past-Dec
  'My father did not read a book.'

The important thing is that if the subject has a [+agreement] feature, it needs to agree with its verbs at least once at some point. It does not have to agree with every verb.

4. Conclusion

In this paper I have claimed that both the short negation and the long negation have the same D-structure where Neg⁰ takes an AgrOP complement, and I have also claimed that the honorific marker si is not in AgrP, and suggested that agreement of the honorific feature between the subject and the verb is the result of head-spec agreement:

(32)
The verb stem can not stand alone, neither can tense. So, the verb incorporates to the tense, resulting the short negation. Optionally, Neg\(^0\) selects AgrOP whose head is filled with \(ci\), and to support the tense, the dummy verb \(ha\) ‘do’ is inserted directly to the tense. This process causes the long negation.
References


Nakajima, Takashi. 1993. Title undecided. Ms., Cornell University, Ithaca, N.Y.


