

SigmaP and Hungarian

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Since the advent of Pollock 1989, functional projections have played an ever increasing role in syntactic analysis.⁰ In the standard theory of functional features in the *Barriers* framework, the feature bundles [E]Tns, \pm Ag[\bar{r}] and \pm Wh] project from heads to I(nfl)P and C(omp)P, respectively (Chomsky 1986). Pollock 1989, noting the internal heterogeneity of the feature bundle [E]Tns, \pm Ag[\bar{r}], proposed that each feature be taken as a category in its own right and project according to X theory, thereby yielding T(ense)P and AgrP, respectively. In the same article, he also argues for a Neg(ative)P, embodying the claim that English *not* and French *ne* head their own projections as well.¹ Whereas Chomsky 1986 posits two functional projections, Pollock 1989 concludes with four.

In this paper, I want to address the question of what justifies a functional projection more generally and question the status of NegP as an independent projection in particular. In §1, after reviewing current assumptions, I propose a strong condition on functional projections in terms of the 'identifiability' of the specifier, head, and complement positions. In particular, identifiability of the specifier entails that the specifier of each functional projection be distinguishable from others with respect to some salient property. Given this condition, I ask whether NegP can be justified as a projection in its own right. In §2, I argue on the basis of Hungarian that NegP is non-distinct from TP, i.e., NegP forms a composite projection with TP which I call the Σ (igma) Phrase (borrowing a notion from Laka 1990²). In §3, I review Pollock's (1989) and Zanuttini's (1990a, 1990b) explicit arguments for NegP, concluding that they constitute necessary but not sufficient motivation for such a projection. I then argue that the Σ P hypothesis not only can be extended to Romance but can also account more successfully for certain head movement facts.

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¹ For Pollock, *ne* (like *not*) is the head of NegP, *pas* its specifier. Rizzi (1990: 17-18), not fully embracing the NegP approach, has *ne* criticize to Agr^o and requires that both *not* and *pas* be A'-specifiers of some projection. For *pas* at least, he takes the relevant projection to be TP. Chomsky 1989, in contrast, assumes that both *not* and *pas* head a NegP.

² Laka 1990 introduces Σ P as a projection for negative and 'emphatic' elements in Basque, English, and Romance. The central difference between her approach and mine is that she posits an IP independent of Σ P; the latter is not a tense projection. The view I will articulate is that they are effectively the same projection.

Σ P is a composite functional projection containing (minimally) tense and (optionally) negation.³ As such, it replaces TP. The essential difference between Hungarian and Romance in this regard is that [Spec, Σ P] is an A'-position in the former and an A-position in the latter. The negative marker, when a head, projects not to NegP, but rather with the [-tense] head to Σ P.

1. Functional projections

In the current Government-Binding (GB) approach to phrase structure with functional projections, a NegP exists insofar as the negative marker is a head of category Neg^o, i.e., a functional head projects to a full X' projection of the same type. In this section, I propose a stronger (more empirically testable) condition on functional projection-hood in terms of standard X' theory. The essence of this condition is that a functional projection should have not only a characteristic head and complement type, but also an identifiable specifier type. Given this condition, I will later claim that full motivation for NegP as a projection of its own is lacking.

Speas 1990 hypothesizes that there is one rule of the base, the 'Project Alpha' rule. She states it as follows (p. 43):

- (A) PROJECT ALPHA: 'A word of syntactic category X is dominated by an uninterrupted sequence of X nodes.'

Speas then proceeds to define both 'maximal projection' and 'minimal projection' in terms of being either the highest or lowest in a projection sequence. To wit (p. 44):

- (B) Maximal Projection: $X = X_{max}$ iff VG which dominate X, $G \neq X$.
Minimal Projection: $X = X^o$ iff X dominates a word.

Thus, the maximal projection is the highest X node in an uninterrupted sequence of X nodes, and the minimal projection is the lowest (a terminal node). For Speas, the licensing of complements and specifiers is dependent on the properties of the head. For example, a specifier position is projected iff the head assigns a 'Kase feature'⁴ leftward to that position; otherwise it is not (p. 112). In sum, Speas claims (p. 114) that 'functional heads must have grids which specify what sort of complement they take, and specify the Kase features that they have.'

In this connection, we can ask what the grid of the negative marker looks like. In particular, does it assign a Kase feature to its specifier? Although Speas allows that a particular functional head of category X^o may not be a Kase assigner (cf. [-Wh] vs. [+Wh]), generally there is always at least some member of category X^o which is a Kase assigner. The NegP hypothesis has the characteristic that there is a single member of the category Neg^o, hence if this category contains a Kase assigner, we do not have far to search. Suppose, then, that we interpret Speas in the strongest form, i.e., as saying the following:⁵

- (C) PROJECT ALPHA for a functional element of category X^o \leftrightarrow at least one member of X^o both selects a complement and is a Kase assigner.

³ In this paper, I remain agnostic about the role of Agr. My analysis is compatible with Agr either projecting to AgrP or constituting another feature specification in Z^o.

⁴ A Kase feature is a type of abstract agreement feature, such as [-Wh] or Case: the Spec/head relation is thus an agreement relation. Heads may or may not assign a Kase feature. The complementizer *that* ([-Wh]) does not, hence its specifier position is not projected. In contrast, the [+Wh] element does, hence its specifier position is both projected and filled with a Wh-phrase.

⁵ I am aware that Speas does not actually phrase her thesis in this way. But since I am interested in strong possible motivation for NegP, I seek a strong but reasonable condition on functional projections.

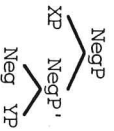
In current X' theory, Ernst (1991, 1) diagnoses the 'Obligatory Functional Category Hypothesis', a hypothesis which he rejects in his paper.

(D) 'All zero-level functional elements of category F take a complement and project to a maximal projection FP.'

In the standard approach, (D) entails that if the negative marker belongs to category Neg, it will project to NegP and hence will have both a complement and a specifier. This is because to be an XP means that X° has a complement and that X' has a specifier. In contrast to Speas's theory, the full projection is a property of the phrase structure, and not of the head.

If NegP exists, then its structure according to (D) is that shown in (E).

(E) NegP schema



Minimally, it includes a specifier (XP) and a complement (YP), its location in the tree depending on the dominance ordering among the functional projections. If a principle like (D) is correct, then strong support could be adduced for it by arguing that the FP projected from a functional element F° does indeed contain both the specifier and complement predicted to exist. In terms of NegP, then, the issue is not only whether Neg° exists, but also whether XP and YP can be identified. If they can, then this would constitute fairly solid evidence for the existence of NegP. I state this condition as follows:

(F) NegP ↔ (i) Neg° selects a complement YP and (ii) NegP' has an identifiable specifier XP.

As with (C), (F) establishes a strong condition on NegP. Of course, one may consider either (C) or (F) to be too strong, preferring the weaker statement in (A) or (D). I cannot argue with this preference; if accepted, the matter simply becomes a theory-internal one, and it is difficult to see what would count as evidence against either (A) or (D).⁷ Therefore, for the sake of argument I retain the strong variants (C, F), for either of these has a more testable basis than (A, D). For concreteness, I will henceforth refer only to (F) and the task will be to evaluate NegP proposal with respect to it.

2. SP in Hungarian

Facts from Hungarian indicate that a generalization is missed if NegP is postulated. Specifically, the A-character of [Spec, NegP] is not distinguishable from the A-nature of the specifier of some more general projection. Thus, by the condition (F)

⁶Clearly, much depends on what I mean by 'identifiable' here. The idea is that [Spec, NegP] should exhibit some property which distinguishes it from other specifiers. For example, [Spec, CP] is distinguishable from [Spec, IP] in that it is the landing site of Wh-phrases, whereas the latter is the position to which nominative Case is assigned. The question is whether [Spec, NegP] also has some such distinguishing property.

⁷Ernst (1991, 8-9), who also rejects (D), points out that if *not* is a head in English, then it does not count as a potential (intervening) head governor for head movement, in violation of Rizzi's (1990) Relativized Minimality. (Cf. *Mary has not left*, where *has* has moved from *Agro* past *not* to *To*.) This is a theory-internal argument that (C) is problematic.

of the previous section, the postulation of NegP is not fully justified and the negative marker is to be analyzed as an element of this more general projection. Adopting the essential insight (but not the accompanying details) of Laka 1990, I call this latter projection SP, a projection for focus and negation. Negation does not constitute a syntactic category in its own right (Laka (1990, 86)).

Hungarian contains a wealth of preverb-verb combinations, many partially or fully lexicalized, which are subject to tmesis (lit. 'cutting') in the syntax. Some examples of these are given in (1) ('PV' abbreviates 'preverb').
(1) *be-fejez* 'finish', *le-fordít* 'translate', *meg-ismér* 'recognize', *ki-javít* 'correct'.
The conditions for the tmesis of such complex verbs play a vital role in the argument for SP. I now review these conditions.

(i) In neutral affirmative sentences, the PV immediately precedes the simple (preverb-less) verb; in negative sentences it does not. The negative marker *nem* in Hungarian is obligatorily preverbal.

(2) Sentence negation

- a. *Mari le-fordította a cikket.* *Mari nem fordította le a cikket.*
Mary PV-translated the article Mary NEG translated PV the article
'Mary translated the article'
'Mary didn't translate the article'

- b. **Mari fordította le a cikket.* d. **Mari nem le-fordította a cikket.*
Mary translated PV the article Mary NEG PV-translated the article

(2b) is bad because the PV must precede the simple verb in a neutral affirmative sentence. (2c, d) show that the PV follows and cannot precede the verb when *nem* is present.

(ii) A focussed phrase having the exhaustive listing interpretation similarly induces separation of the PV (focus indicated in bold italics).

(3) Exhaustive listing-focus predication

- a. *Mari fordította le a cikket.* b. **Mari le-fordította a cikket.*
Mary translated PV the article Mary PV-translated the article
'It is Mary who translated ...' ... the article'

(iii) The *csak*-phrase, being a focussed constituent, also induces separation.

(4) *csak*-focus ('only'-phrase)

- a. *Csak Mari fordította le a cikket.*
only Mary translated PV the article
'Only Mary translated the article'

- b. **Csak Mari le-fordította a cikket.*
only Mary PV-translated the article
(iv) Wh-phrases, since they are inherently focussed items, require separation.⁸

(5) Wh-focus

- a. *Ki fordította le a cikket?* b. **Ki le-fordította a cikket?*
who translated PV the article who PV-translated the article
'Who translated the article?'

⁸I assume the result that Wh-phrases do not occupy [Spec, CP] in Hungarian. See É. Kiss 1987 for details.

(v) 'Exclusive' adverbs (broadly characterizable as 'contrastive') also effect tmesis of the complex verb (cf. Kiefer (1967, §1.5), É. Kiss (1987, 90)).⁹

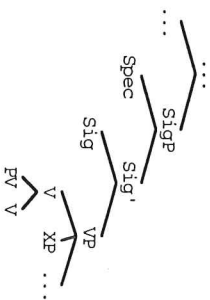
(6) 'Exclusive' adverbs

- a. *Mari hídza fordította le a cikket.*
'Mary in-vain translated PV the article'
- b. **Mari hídza le-fordította a cikket.*
'Mary in-vain PV-translated the article'

The data in (2-6) clearly support the view that the negative marker *nem* patterns with focussed phrases in requiring tmesis of the complex verb. If a NegP is postulated to account for the facts in (2), then the similar behavior of focus in the non-negative sentences (3-5) is not explained in an analogous way. On the other hand, if we postulate a special focus projection for Hungarian, as Brody 1990 does, then we do not expect the negative marker to induce tmesis as well. I propose that this parallel between focus and the negative marker can best be captured in an analysis which makes use of the ΣP projection, a projection which houses both types of items.

The essential ingredients of my analysis are as follows. I assume that lexical items are inflected fully inflected, consequently the verb does not 'pick up' its tense and agreement morphology in the syntax; rather, such morphology is 'checked' in the appropriate position (Chomsky 1991). Following É. Kiss 1990 and Brody 1990, I do not postulate an independent IP in Hungarian; in my analysis, ΣP effectively fills this role. The basic order of phrases in the preverbal field in Hungarian is such that topics precede quantified phrases which in turn precede focus (É. Kiss 1987, Brody 1990). Since it is beyond the scope of this paper to present a full analysis of word order, I limit myself to a consideration of ΣP , the 'post-quantifier field' in Hungarian. I analyze the ΣP as an optional functional projection, dominating the VP, as shown in (7).¹⁰

(7) $\text{SigP} = \Sigma P$



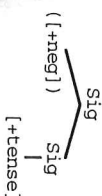
[Spec, ΣP] is an A'-position, licensed as all specifiers are, by the head of the projection (Spears 1990). In Chomsky's (1991) terms, [Spec, ΣP] is not 'L-related' to Σ° in that the specifier does not stand in a local 'agreement' relation with the head Σ° . This specifier position is inherently associated with a Σ FEATURE.

⁹ 'Exclusive' adverbs are not canonical instances of focus, hence I do not write them in bold. They are in some sense inherently 'contrastive', but unlike true focussed items, they do not necessarily trigger the 'radicating' prosody noted by Kálmán et al. 1989, whereby phrases following the focussed constituent are all reduced in stress. This is another reason why a focus projection would be too narrow a construct.

¹⁰ Following É. Kiss 1987, I assume (though not crucially) that Hungarian is non-configurational in the sense that the VP has no distinguished position for the subject.

which is roughly like a [+focus] or [+contrastive] feature marking. The essence of ΣP is that it is a composite projection whose feature structure accommodates (minimally) both [+tense] and [-neg]. The structure of Σ° is given in (8), where the left branch is optional.

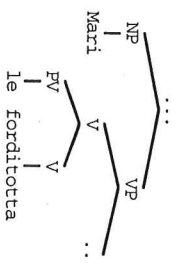
(8) Head of ΣP



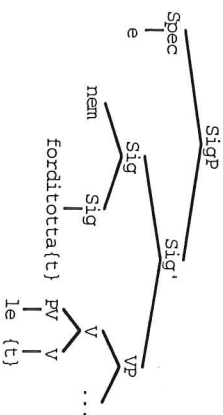
It is evident that ΣP is like TP in that it contains an obligatory [+tense] head. Nevertheless, it cannot be identified with TP for two reasons. First, and most obviously, Σ° can also be marked as [-neg]. This would be unexpected if ΣP were actually the same as TP, for the negative marker is not of category T^o. Second, and crucially, ΣP is an optional projection even if the verb itself is inflected as [+tense], i.e., I assume that there is the option of checking the morphological features of the verb in V^o as well. The optionality of ΣP is a feasible hypothesis precisely because [Spec, ΣP] is not L-related to and therefore does not stand in an agreement relation with the verb. (This contrasts with the situation in Romance, to be considered later, where [Spec, ΣP] is L-related to the head (hence an A-position) and is therefore effectively obligatory.) If ΣP were merely TP, then its optional character in Hungarian would be unexpected.

To see how this analysis gets off the ground, consider the structures assigned to the examples in (2-6).

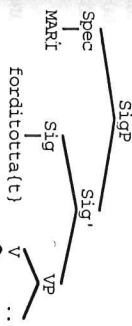
(9) a. Structure for (2a)



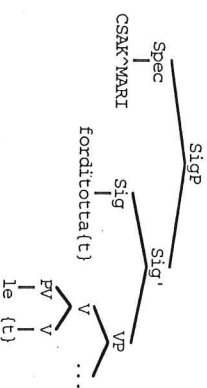
b. Structure for (2c)



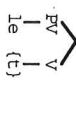
c. Structure for (3a)



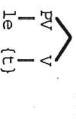
d. Structure for (4a)

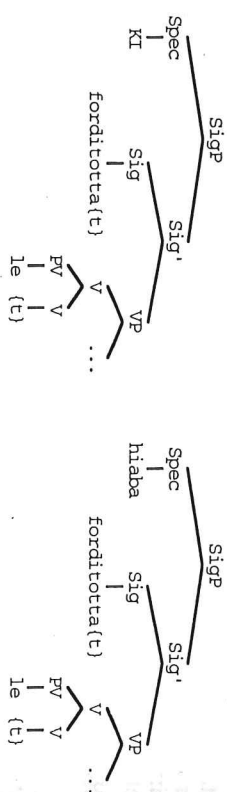


e. Structure for (5a)



f. Structure for (6a)





In (9a), ΣP is not projected, since it need not be. The verb is drawn from the lexicon fully inflected, hence it does not have to move to Σ^o to 'pick up' its inflectional morphology. Of course, this entails that the [-tense] feature of the verb be 'checkable' in V^o when there is no ΣP . Assuming that [-tense] can be generated in at most one head position, the statement in (10) ensures that the respective head position is permitted to be V^o . Thus, if ΣP is projected, there is really no option, for [+tense] must appear in Σ^o (cf. (8)). On the other hand, if ΣP is not projected, then (10) in effect has to be chosen so as to ensure feature 'checking'.

(10) [-tense] optionally in V^o

(+tense)]
V

In (9b), ΣP is projected as a consequence of the negative marker in its head. The specifier position remains empty (alternatively, it is not projected, cf. Speas 1990), as nothing forces it to be filled. Since ΣP is projected, [-tense] must be present in Σ^o , hence the verb must move to this position to have its feature checked. If the verb remains in the VP, checking fails, and the structure is ruled out (cf. (2d)).

Why, then, is (2b) bad? Its structure is essentially that of (9b), with the difference that the negative marker is absent. But nothing forces the negation anyhow, and it is clear that checking of [+tense] is successful. Strictly speaking, then, (2b) is grammatical. The problem with (2b) lies in how such V-PV structures are interpreted in Hungarian: they cannot have perfective aspect (É. Kiss (1987, §2.3.4). Thus, (2b) is rejected in isolation, but it becomes acceptable in a context which forces a progressive aspect reading:

(11) (2b) as progressive aspect ('' indicates heavy stress)

Mari (épp) 'fordította le a cikket, amikor a postás csengett.
Mary (just) translated PV the article when the postman rang
'Mary was just completing translating the article ...
... when the postman rang the bell'

The interpretability of sentences like (2b) depends a lot on both the local context and the semantics of the complex verb in question. Nevertheless, the structures themselves are grammatical, as is predicted by the present account.

ΣP is also projected in the remaining structures of (9). In each case, the specifier position is filled by an item which receives a focus or contrastive interpretation. The verb must consequently raise to Σ^o so that its [+tense] feature can be checked; ungrammaticality results if it does not do so, as (3b, 4b, 5b, 6b) show.

A straightforward prediction of this analysis in which the negative marker occupies Σ^o is that the specifier position should be fillable even in the presence of

nem. This expectation is borne out, as seen in (12). Here, ΣP is fully articulated.¹¹

(12) Focus in specifier; *nem* in head
Mari nem fordította le a cikket.
Mary NEG translated PV the article
'It is Mary who didn't translate the article'

Another prediction of the present account crucially depends on the feature [+tense] being generated in Σ^o . Suppose that the verb is drawn from the lexicon inflected with a suffix specified as [-tense]. If ΣP is projected, then the verb has to raise to have its tense feature checked. But if the verb is equipped with a suffix marked as [-tense], then checking should fail once the verb moves to Σ^o . This means that ΣP should be incompatible with a verb specified as [-tense]. To test this, consider the 'adverbial participle' as exemplified in the absolute construction.¹²

- (13) [+tense] of Σ^o is incompatible with [-tense] of adverbial participle
- A cikket le-fordítva, Mari sokkal jobban megértette az elméletet.
the article PV-translated Mary much better PV-understood the theory
'Having translated the article, Mary understood the theory much better'
 - *A cikket nem fordítva le, Mari rosszul értette meg az elméletet.
the article NEG translated PV Mary poorly understood PV the theory
'Having not translated the article, Mary poorly understood the theory'
 - *A cikket fordítva le, Mari sokkal jobban megértette az elméletet.
the article translated PV Mary much better PV-understood the theory
'Having translated the article, Mary understood the theory much better'
 - *Csak a cikket fordítva le, Mari sokkal jobban megértette az...
only the article translated PV Mary much better PV-understood the...
'Having translated only the article, Mary understood the theory much better'
 - *A cikket nehezen fordítva le, ...
the article with-difficulty translated PV
...
Mari-nak nem sikerült megértenie az elméletet.
Mary-to NEG succeeded PV-understand the theory
'Having translated the article with difficulty, ...
... Mary didn't manage to understand the theory'

The ungrammaticality of (13b-e) provides striking confirmation of the ΣP hypothesis. For if the adverbial participle is specified as [-tense], then checking of this feature against [+tense] will fail after verb movement to Σ^o , with the consequence that ΣP cannot be projected in an absolute construction. But if ΣP is not projected, then [Spec, ΣP] is not present, and neither the (syntactic) negative

¹¹While (9b-d) are all compatible with the negative marker present, as expected, (9e) is not, i.e., **Mari hába nem fordította le a cikket*. **Mary in vain didn't translate the article*. An independent condition, valid in both Hungarian and English, requires that the 'exclusive' adverb have narrow scope with respect to the negative marker, i.e., *Mari nem fordította le hába a cikket* 'Mary didn't translate the article in vain'.

¹²The designation 'adverbial participle' is my translation of the Hungarian term *határozói igenév*. The unit is similar to (but not the functional equivalent of) a past participle. The feature

system that I presuppose for tense is $\begin{matrix} [+tense] \\ [-tense] \end{matrix}$ $\begin{matrix} [+finite] \\ [-finite] \end{matrix}$, where both indicative and subjunctive affixes are subtypes of [-finite] and the participial ending -*váve* is marked as [-tense].

marker, focus, nor an 'exclusive' adverb can appear in that clause. This is exactly what is expected in the present analysis, where [+tense] occupies Σ^0 .¹³

Note that (13b) becomes grammatical if we insert the negative marker between the PV and the simple verb. This appears to contradict the claim that ΣP is not projected in such clauses.

- (14) (cf. (13b))
 A cikket le *nem* fordítva, Mari rosszul értette meg az elméletet.
 the article PV NEG translated Mary poorly understood PV the theory

Although (14) may appear to be a counterexample, I claim that this *nem* is a morphological negative marker. Independently, there must be a morphological rule which places *nem* between the PV and simple verb before derivational suffixation applies:

- (15) a. [le *nem* fordított] cikk the PV NEG translated article
 'the untranslated article'
 b. a vonat [meg *nem* érkezése] the train PV NEG arrival-POSS
 'the train's non-arrival'

The negated adverbial participle in (14) can have the same basic derivation as the deverbal adjective and nominal in (15a, b), whatever the preferred analysis of the latter is. In any case, examples like (14) appear to have an alternative explanation.

To summarize, I have argued that Hungarian has a ΣP projection whose specifier is an A'-position and whose head is a complex feature structure including [+tense] and (optionally) [+neg]. ΣP is optionally projected, with the consequence that the verb raises only when ΣP is projected. I have also argued that ΣP cannot be identified with TP, for the negative marker is not of category T⁰ and TP is not an optional projection in tensed clauses.

Brody 1990 claims that Hungarian has an optional F(focus)P, projected whenever a focussed constituent is needed. In his account, the verb raises to the head F⁰ to assign a focus feature to the specifier as a species of Spec/head agreement. The main difficulty with this conception is that it is too narrowly construed. Negative sentences like (2c) or those in the progressive aspect like (11) do not appear to have a focussed constituent. If ΣP is Brody's FP, then the inversion-inducing behavior of *nem* is quite puzzling, for the (sentential) negative marker is not commonly assumed to be a focus formative, hence it would not fill the head of FP. If so, then Brody requires a different treatment of negation (perhaps via NegP), and the claimed parallel with *tmesis* is not straightforwardly captured. I conclude that ΣP is not inherently a focus projection.

ΣP satisfies the criterion for functional projections given in (F) of the previous section. [Spec, ΣP] is identifiable by virtue of its A'-character, and its head is a feature structure containing [+neg] and [+tense], selecting a VP complement. If, on the other hand, we postulate both a NegP and a TP for Hungarian, their specifiers would be effectively indistinguishable, and so by (F) we would have to conclude that a single projection is present.¹⁴

3. About NegP

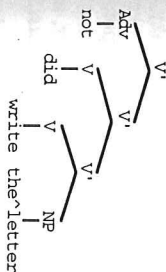
In §2, I have argued that NegP in Hungarian is indistinguishable from a more general projection ΣP . This claim is supported both empirically and by the strong criterion (F) on functional projections. In this section, I review the major

arguments for NegP and conclude that they constitute necessary but not sufficient motivation for NegP. Finally, I argue that the ΣP hypothesis, if extended to Romance, can even account for certain data better than the NegP analysis. With regard to NegP, the central difference between Hungarian and Romance is that [Spec, ΣP] is a A'-position in the former and an A-position in the latter.

3.1. Pollock's legacy

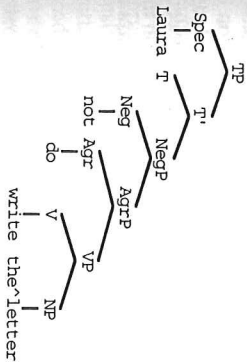
It is reasonable to speculate that the widespread popularity of NegP is due in large part to the influence of Pollock 1989. Note, however, that Pollock himself is quite cautious, stating (p. 421, fn. 50) that 'languages could differ precisely in that some could have a NegP and others ... a purely adverbial Neg'. In the same place he even suggests that '[i]n other languages Neg might be a specifier of Tense.' Yet if languages can differ in this way, then we should ask what factor(s) might determine the presence of NegP in a given language.

- (16) a. Baker's analysis



Put another way, the issue is whether there are criteria for distinguishing the more traditional 'adverbial Neg' hypothesis from the newer NegP one. The traditional view is that the negative marker of predicate negation is adjoined to and thereby has scope over the VP by surface structure (cf. Klima 1964, McCawley 1988: v. 2, chap. 17). Both Baker 1991 and Ernst 1991 pursue versions of this traditional view, arguing that Pollock's NegP in English is both unnecessary and undesirable. Baker, for example, would advocate a D-structure like that in (16a) for *Laura did not write the letter*, whereas Pollock would propose the one in (16b). For Baker, certain special verbs like *do* must raise past *not*; for Pollock, *do* raises past *not* to T⁰, independent of whether *not* is present. As shown in (16a, b), the salient difference between the two analyses is whether *not* is a head or not.

- (16) b. Pollock's analysis



Why does Pollock postulate a NegP for English and French? The idea is that NegP is an inherent barrier, blocking the raising of Pollock's 'empty *do*' verb ' \emptyset ' to T⁰ in English, thereby ruling out **Laura \emptyset not *i* left* (cf. *Laura never left*, *Laura left*), and preventing the raising of [-finite] verbs to T⁰ in French (cf. the contrast *Ne pas regarder la télévision* ... /**Ne regarder pas la télévision* ...). As the empty verb ' \emptyset ' is not lexical, it cannot L-mark the NegP and thus cannot render it transparent

¹³ (13b-e) remain bad even if the adverbial participle remains in the VP, thus appearing after the PV. This is because [+tense] in Σ^0 is never checked against the verb's tense feature, and so the derivation crashes when [+tense] remains unrealized after SPEL-OUT (cf. Chomsky 1991).

¹⁴ I assume that nominative Case is assigned in the VP by the verb (\bar{E} : Kiss 1987).

for antecedent government. The blocking of movement for [-finite] verbs can be viewed as a Minimality effect of the intervening Neg head.¹⁵

I do not intend to engage in a detailed criticism of Pollock's analysis. Both Baker and Ernst argue against the NegP approach for English, maintaining that the data can be satisfactorily analyzed without such a phrasal projection. They find the 'not as head' claim unconvincing. In addition, my point is simply that neither Pollock nor Chomsky 1989 (following him) has any use for the [Spec, NegP] position. Indicative of this is that it is typically left out of their representations, having no special role or property (e.g., see Pollock, p. 397). And yet if this is correct, then strong independent motivation for NegP, as would be required by (F) of §1., is lacking. The specifier of *not* is not identifiable in English.

French is less straightforward in this regard. If Pollock is correct, then *pas* is the specifier, and *ne* the head, of NegP. We might suppose, then, that *pas* is licensed by virtue of standing in this Spec/head relation to *ne*. While this idea is attractive, it is hard to verify directly, for *ne* always raises to T° by S-structure.¹⁶ Thus, it is not obvious that *pas* actually is in [Spec, NegP] as opposed to some other position (e.g., either in another specifier position or in the head of Chomsky's (1989) NegP). Moreover, the NegP hypothesis would fare better if the other 'forclists', i.e., polarity items dependent on *ne* like *rien* 'nothing', *plus* 'anymore', *personne* 'nobody', etc., behaved just like *pas*. If this were so, then it might be argued that all such items are licensed as NegP specifiers of *ne*. However, as Pollock makes clear at various points, this is not the situation. The *forclists* cannot have a uniform treatment even with the postulation of NegP.¹⁷

Whatever the merits of Pollock's particular comparative analysis of English and French, I conclude that it does not sufficiently justify the existence of NegP. Quite simply, insofar as the negative markers *not* and *pas* induce barrierhood behavior in certain contexts, Pollock requires that they head a NegP. If these markers were adverbial Negs, the barrierhood behavior would be unexpected. Thus, on the basis of Pollock, I state the following condition.

(17) NegP ↔ the negative marker creates a barrier for movement (in some context)

If such negative markers interfere with movement, then they must be given expression in the vocabulary that the GB theory of movement makes reference to. This vocabulary includes the notion 'maximal projection' but excludes construction-specific references (e.g., to a negative marker).

Nevertheless, accepting the left side of the condition in (17) may require a leap in faith, for what we are actually allowed to conclude is only that the negative marker is a head element of some projection. That the projection in question is really NegP is an unwarranted conclusion, given (F) of §1. To justify NegP, we should argue (as Pollock does not) that NegP is really distinct from TP. Indeed, the fact that French *ne* consistently ends up in TP at S-structure casts doubt on the validity of this distinction. Therefore, I conclude that unless a persuasive case is

¹⁵Cf. Rizzi 1990. Alternatively, [-finite] morphology is 'opaque' in French, hence the verb cannot raise to T°. For [-finite] sentences with imperative force, though, Pollock clearly invokes the head status of *ne* (p. 402).

¹⁶Pollock (p. 414, fn. 43): '... I am tacitly assuming that Tense will have to include a variety of different positions, one for tense itself, of course, but also others for subject and object clitics and one for negative clitics like French *ne*'.

¹⁷See Pollock (§6.3) for details. It is not even the case that *ne* is always base generated as the head of NegP. For example, the polarity items *point* 'not', *plus* 'anymore', and *guère* 'hardly' are actually specifiers of a VP-initial adverbial phrase with *ne* as a head. It is not clear whether there is also a NegP present in such clauses.

made to the contrary, they are not distinct. (17) is too strong even if the negative marker is a head element.

3.2. Zanuttini on NegP

Zanuttini (1990a, 1990b) takes a fresh perspective on NegP, arguing for the following two theses:

- (18) a. NegP → TP
b. In Romance, the preverbal negative marker heads a NegP, whereas the postverbal negative marker does not.

The content of (18a) is that Neg° always selects TP, whereas (18b) states that only a preverbal negative marker projects a NegP. In other words, the following deduction is said to be valid.

- (19) preverbal negative marker → NegP → TP

The basic empirical contrast that Zanuttini seeks to explain is exemplified in (20) (from Zanuttini (1990a, 518)):

- (20) Italian Piedmontese
a. Maria non ha parlato molto. b. Maria a l'ha nen parlà tant.
Mary NEG has talked much Mary cl has NEG talked much
'Mary hasn't talked much' 'Mary hasn't talked much'

In Italian the negative marker precedes the inflected verb, while in Piedmontese it follows it. This is the surface difference to be accounted for.

The observation that Romance splits into those languages with a preverbal negative marker and into those with a postverbal one is not new (e.g., see Posner 1985, Schwieger 1988). Zanuttini's new twist on the old observation is to claim that this surface variation in the position of the negative marker correlates with the presence vs. absence of a structural NegP. Specifically, she offers three pieces of evidence in support of this thesis (cf. (18b)).

- (21) a. The postverbal negative marker overlaps in its distribution with certain adverbs; the preverbal negative marker does not.
b. The postverbal negative marker can also occur to the left of the complementizer of a dependent clause; the preverbal negative marker cannot.
c. The postverbal negative marker does not interfere with head movement; the preverbal negative marker does.

(21a) is a classic syntactic distribution argument. For both Romance and Hungarian, the preverbal negative marker clearly has a distinguished distribution, a fact which any theory needs to account for. Zanuttini captures this by hypothesizing that the negative marker heads its own projection, the NegP. The postverbal negative marker, on the other hand, has a distribution which overlaps with that of certain sentential adverbs (Zanuttini (1990a, 519)), hence it is not a head but rather an adverb in some adjoined position. While this evidence does lead to the conclusion that there are two types of negative markers, it is not sufficient to establish NegP. In particular, it does not rule out the possibility that the preverbal negative marker appears in another projection, e.g., $\bar{X}P$.

(21b) is also an argument based on distribution. The reasoning is that the adverbial nature of the postverbal negative marker allows it to adjoin to a number of projections, including CP. The head nature of the preverbal negative marker, in contrast, renders it particularly selective of its complement—not just any one will do. Again, while this is a real difference between the two negative markers, it falls short of requiring the postulation of NegP, for the hypothesis that the preverbal (but

not the postverbal) negative marker is in a more general projection like ΣP would also account for these facts.¹⁸

These two pieces of distributional evidence that Zanuttini adduces suggest that she would support the following statement:

- (22) NegP \leftrightarrow the negative marker has a unique distribution and selects its complement (a TP in Romance)

What is attractive about (22), when contrasted with (17), is that the conditions for NegP are now at least more firmly empirically grounded. In principle, it is straightforward to determine whether the negative marker has a unique distribution and selects for a particular type of complement. Note, however, that Zanuttini makes no use of [Spec, NegP], thereby satisfying only half of the requirement on functional projections given in (F). Indeed, it is unclear whether [Spec, NegP] has any identifiable function in the Romance languages with preverbal negative markers. Thus, when measured by these strong criteria, the projection NegP is itself not fully motivated.

What about the third piece of evidence in (21c)? Here we revisit (17), the barrierhood behavior of the negative marker. Specifically, Zanuttini claims that it is the preverbal negative marker which interferes with verb or clitic movement. Consider her examples:

- (23) Piedmontese (Zanuttini (1990a, 521-522))
- | | | | | |
|--------|----------------|--------|--------------------------------|--------------------|
| a. A-n | lo | da | nen. | c. Posso parlarti. |
| | Cl-subj-Cl-dat | Cl-acc | gives NEG | can talk-to-you |
| | | | 'He/she won't give that to me' | |
- Italian
- | | | |
|----------------------|--------------|---------------------------------|
| b. *Maria parla non. | d. <i>Ti</i> | posso parlarti e _j . |
| Mary talks NEG | to-you can | |
| 'Mary doesn't talk' | | |
- | | | |
|-------------------------|-----------------|-------------------------------------|
| e. Posso non parlarti. | f. ?? <i>Ti</i> | posso non parlarti e _j . |
| can NEG talk-to-you | to-you can | NEG talk |
| 'I can not talk to you' | | |

The Piedmontese negative marker in (23a) does not prevent the verb and clitics from moving past to its left. Although Zanuttini is not explicit about the structure involved, if we accept Kayne's (1991) view on the matter, then *nen* is in [Spec, TP], and the (finite) verb and clitics move past to a higher AgrP. Since *nen* is not a head, no blocking effect for head movement is observed. (23b) shows that no such leftward movement is possible in Italian, an indication of *non*'s head status.

(23c) and (23d) are straightforward examples of non-raising and raising of the pronominal clitic, respectively. (23e, f), then, are the crucial examples.¹⁹ (23e) is acceptable because the finite verb starts out in a higher projection and so does not have to raise past *non*. (23f), in contrast, is bad (or at least much worse) because the pronominal clitic *ti*, claimed to be a head, has moved past the head *non* and a Minimality effect results.²⁰

¹⁸The issue of how constituent negation should be analyzed comes to mind, for very often the same negative marker is used in both sentence and constituent negation. I leave this matter open.

¹⁹The contrast is originally due to Kayne. See Pollock (p. 421, fn. 50) for similar examples.

²⁰If the negative marker is inert for government, then Minimality is not relevant. Zanuttini (1990a, 522) actually characterizes the blocking effect in another way. If the negative marker, not being a lexical category, lacks the ability to L-mark its complement, then this complement phrase will act as a barrier to antecedent government by the moved clitic. In either characterization, the crucial point is that *non* is a head.

Given the contrast exhibited in (23e, f), the question is whether the NegP hypothesis is crucial to explaining it. The interference effect could also be captured by the claim that *non* is a head in ΣP , the hypothesis already suggested (see below). Thus, invocation of NegP is a possible but clearly not critical hypothesis.

More generally, we might wonder whether Zanuttini's NegP must always engage in barrier-like behavior for clitic movement. Some data from other Romance languages in Posner (1985, 179-180) cast doubt on this view.

- (24) Modern Leonese (Posner's (14))
- | | |
|-----------------------------|------------------------------|
| a. porque lo non veia | Old Spanish (Posner's (15i)) |
| because him not he-saw | que la non pierda |
| 'because he didn't see him' | that her not he-should-lose |
- Old Portuguese (Posner's (15iii))
- | | |
|---|-----------------------------|
| c. que o irmão the não queria revelar | that he shouldn't lose her' |
| that the brother to-him not wished to reveal | |
| 'which his brother didn't want to let him know' | |

The clitic has moved past the preverbal negative marker in all of these examples. If the preverbal negative marker projects a NegP, then it is not obvious why clitic movement is not blocked here. Naturally, the facts in (24) may have an alternative explanation,²¹ but for the present it appears that the preverbal negative marker, even if a head, does not interfere with head movement in such examples. The sporadic blocking effects of NegP surely do not suffice to establish its existence.

I conclude that Zanuttini is correct about the preverbal negative marker in Romance being a head element as opposed to an adverbial one. Nevertheless, if the justification of functional projections is taken seriously (cf. (F)), then she may also overstate her case for NegP. There is no distinction, as far as I can determine, between the properties of [Spec, TP] and that of [Spec, NegP].²² And insofar as this is true, then we have reason to think that only a single projection is present.

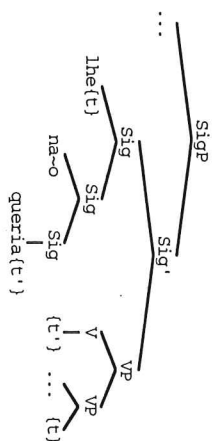
3.3. ΣP in Romance

Suppose that Romance also has ΣP , differing from ΣP in Hungarian in that [Spec, ΣP] of the former is an A-position, i.e., the position in which nominative Case is checked. It follows that ΣP will be effectively obligatory in Romance, for if ΣP is not projected, then nominative Case will not be checkable and the derivation will crash. In principle, though, ΣP is optional in Romance as well, and I assume that it is not necessarily projected when nominative Case does not need to be checked, e.g., with dependent infinitives (cf. (23d)). As in Hungarian, Σ° is a complex feature structure, containing at least [+tense] and (optionally) [+neg].

²¹For example, if these 'clitics' are actually NPs, then these would not be instances of head movement.

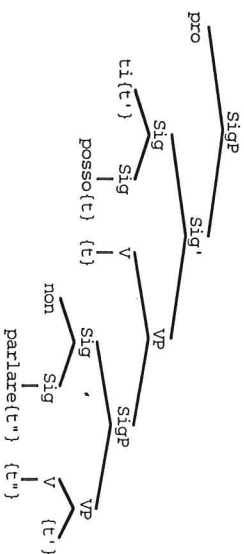
²²Stevens 1991 postulates a NegP in Spanish to account for a difference in scopal behavior between negative and positive quantifiers, arguing that only clauses with the former have a NegP. Although the matter clearly warrants closer scrutiny, the fact that negative quantifiers do not share certain semantic properties with positive quantifiers does not *ipso facto* justify the presence of a syntactic NegP. See Laka (1990, §3.4.3), for a discussion similar to Stevens'.

(25) Structure for (24c)



I believe that the ΣP hypothesis is more successful than Zanuttini's in analyzing examples like (24c), assuming that clitic movement is involved. The salient difference between Zanuttini's approach and mine is that where she has the two functional projections NegP and TP, I have only ΣP . Her TP cannot be L-marked by the negative marker and therefore creates a barrier for (head) movement. Thus, when the clitic moves out of TP into NegP, as in (24), the result is (incorrectly) predicted to be ungrammatical. In my approach, however, the clitic moves only out of the VP and not out of ΣP , the former being L-marked by the raised verb in Σ^o . Thus, no barrier is crossed, unlike in Zanuttini's account. Neither does any potential head governor intervene, thereby respecting Relativized Minimality (Rizzi 1990). The relevant structure for (24c) is given in (25).

(26) Structure for (23f)



If the examples in (24) are analyzed in this way, then we may ask whether (23f) is still ruled out. Here, the negative marker appears between the auxiliary *posso* and the main verb *parlare*. For Zanuttini, both NegP and TP intervene between the two verbs, whereas only ΣP does for me. Her analysis is essentially the same: the clitic raises out of the lower TP barrier, a prohibited move. This (now correctly) predicts that long clitic movement over *non* in (23f) will be prohibited.

In my analysis, this result is also predicted, though, unlike Zanuttini, I cannot invoke barrierhood in my explanation. Consider (26), the basic structure I attribute to (23f). The lower VP is L-marked by the raised infinitive *parlare*, voiding its barrierhood. Analogously, both the lower ΣP and the higher VP are L-marked by the auxiliary *posso*, hence they are also not barriers. Therefore, the clitic *ti* does not move through a barrier on its way to the higher Σ^o . Nonetheless, a Minimality violation does occur, for the lower Σ^o *non parlare* is a closer potential antecedent governor than *posso* for the clitic.²³ The lower head governor thus 'intervenes' and the derivation is ruled out.

Zanuttini's analysis, while accounting for (23f), incorrectly rules out (24) precisely because she posits two functional projections where I posit one. I have argued that it is this difference, the essence of the ΣP hypothesis, that is critical.

4. Conclusion

Two central theses emerge from this paper. The first is that NegP does not constitute a functional projection in its own right. Instead, there is a composite projection ΣP which includes both negation and tense. This conclusion is warranted not only by the theoretical prerequisite in (F), but also by data from Hungarian and Romance. The second thesis is that [Spec, ΣP] can be either an A'-position (Hungarian) or an A-position (Romance). This difference accounts for the optional nature of ΣP in Hungarian and its near obligatory character in Romance.

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²³Rizzi (1990, 7): 'Z is a typical potential antecedent governor for Y, Y in an X^o-chain = Z is a head c-commanding Y'. Note that (25) crucially does not have an intervening head governor.

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Verb Second, Negation, and Minimality in Danish

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0. Introduction

The principal issue addressed in this paper is the interaction between Verb Second (V2) and negation. The paper focusses on Danish, and the problem under investigation is illustrated in (1).

- (1) a. Peter troede [at den film_i havde_i Maria_t set_t].
 (Peter thought that that film_i had_i Maria_t seen_t)
 "Peter thought that that film, Maria had seen."
 b. *Peter troede ikke [at den film_i havde_i Maria_t set_t].
 (Peter thought not that that film_i had_i Maria_t seen_t)
 "Peter didn't think that that film, Maria had seen."

Example (1a) illustrates an environment where Danish ordinarily allows V2, namely in the complement of a non-wh-selecting verb. Example (1b) introduces the problem; when negation appears in the upstairs clause, V2 is no longer allowed to apply in the embedded clause.

The chief problem in accounting for the contrasting judgements for (1a vs b) lies with the absence of any element inside the embedded clause of (1b) which would interfere with the application of V2.

V2 involves movement of the finite verb to a position immediately before the subject. In declaratives and Wh-questions, this is accompanied by A'-movement, placing respectively a Topic- and Wh-phrase immediately before the fronted verb. This is illustrated with examples from Danish in (2).

- (2) Da. a. Den film_i har_i [Maria aldrig_t set_t]
 (that film_i has_i Maria never_t seen_t)
 "That film, Maria has never seen."