Interface Issues in the English Imperative

by

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Abstract

Two puzzles in the syntax of the English imperative are treated here as consequences of interface conditions. The first concerns the inability of certain predicates to take an overt subject in the imperative. The second concerns the ungrammaticality of certain negative and emphatic imperatives with an overt subject. The investigation yields a deeper understanding of the role of LF and PF ineffability in the grammar.

A widely encountered generalization holds that the overt subject is optional in the English imperative. Evidence is presented that this generalization is problematic on two counts. First, the presence vs. absence of an overt subject actually correlates with a subtle aspectual distinction. Related to this phenomenon, some imperatives actually disallow an overt subject. This work argues that overt subject licensing in the imperative occurs in a phrase projected from an aspectual feature that is incompatible with the semantic representation of stative predicates. Therefore, the restriction against overt subjects in imperatives with such predicates reflects not a failure in the syntactic component, but ineffability at the LF-interface, where the meaning representation of the predicate is incompatible with it the syntactic context it is embedded in.

A second major puzzle in the imperative is that the overt subject is disallowed in negative/emphatic imperatives with *do (not)*, yet allowed in negative imperatives with *don't*. This restriction on the occurrence of the overt subject is argued to stem from a disruption that the subject argument causes for the satisfaction of a morphological adjacency requirement of the sentential negation head [NEG], or its affirmative counterpart, [AFF]. In this case, the unavailability of overt subjects in imperatives with *do (not)* stems not from a restriction in the syntax or semantics, but from ineffability at the PF-interface, where the overt subject exerts an intervention effect for a morphological adjacency requirement that holds between the polarity heads [NEG] and [AFF] and the verb.

Chapter 1 provides background material and introduces previous attempts to explain the two major puzzles identified above. Chapter 2 deals with the semantic restriction on overt subject imperatives. In Chapter 3, the morphological adjacency disruption approach to the **do (not) subject* puzzle is proposed. Consequences of this approach for the nature of head movement are explored, and a structural account of *do*-support under a PF head movement analysis is developed. Chapter 4 examines some consequences of the proposal in Chapter 3 for the phenomena of Auxiliary Reduction and Neg-raising in English.

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Title: Professor of Linguistics

Acknowledgments

Not long into my first semester, I developed a sneaking suspicion that I liked linguists more than I actually liked linguistics. When I first came across the following passage in a novel, I wondered whether I too would end up walking dogs for a living when (or better, if) I finished my degree at MIT.

> "Where did you go?" I ask casually. I'll need to be careful, tell him without seeming insincere that it doesn't make any difference, really, where you go to school.
> "MIT," he says, and then, "do you have any popcorn?"
> I point to the cupboard over the refrigerator. "MIT?"
> "Yeah."
> "The Massachusetts Institute of Technology?"
> "Yeah." He pulls down a package of popcorn, brings it over to the microwave.
> "What did you study?"
> "Astrophysics."
> "And did you finish?"
> "Sure."
> "So... why do you walk dogs?"
> He turns around to look at me. "I like it."
>
> from *Open House*, by Elizabeth Berg (2000)

Fortunately, I had come to a department full of wonderful linguists to like *and* to learn from. Five years later, I have them to thank for sharing their enthusiasm and talent for linguistic research with me, and for opening up the possibility that linguistics may just be something I can say "I like it" about in the future after all.

I owe an enormous debt of gratitude to my thesis advisor, Alec Marantz. Alec's generosity is unmatched by anyone I know; I think that the only time I've ever heard him say "no" was when he was saying "no problem." Alec has been a caring and supportive mentor as well as a remarkable teacher, but more importantly, he has been a great model of how to treat other people (and their ideas) with respect. I thank him for letting me ask the same questions over and over, for returning full chapter drafts with invaluable comments mere hours after finding them tucked in his door, and for reminding me, whenever I lost sight of the big picture, of just what it was I was doing. Though most of my appointments with Alec were not scheduled appointments at all, but events of my showing up in his office with one problem or another, weekday or weekend Alec made time to meet with me. His ability to identify what was and what wasn't a problem for my analysis at any given stage, and to offer solutions for the many problems, is responsible for any progress I have made here. Without those many meetings, the ideas presented here would never have developed into their current form.

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only hope that I have made good use of the suggestions and insights of my committee members; the standard disclaimers apply here in droves.

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My classmates, Karlos Arregi, Paul Elbourne, Michela Ippolito, Julie Legate, Andrea Rackowski, Liina Pylkkänen, and Isabel Oltra Massuet have been a source of great fun as well as great inspiration to me. I wish to especially thank Andrea Rackowski for making the ups and downs of this whole ride bearable by sharing frequent bouts of caffeine and chocolate induced hyperactivity and by participating in fully-detailed recaps of eventful days, not to mention keeping my plants alive on numerous occasions and teaching me how to drive the mean streets of Cambridge and Somerville to the best area grocery stores. I also wish to thank Karlos "no, no, no, no, no....oh, yeah" Arregi for friendly arguments and innumerable walks around the block.

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Without the support of my family, this thesis and the work leading up to it would never have been completed. My grandparents, Rena and Henry Shanfield, and my aunt, uncle, and cousins, Sylvia, Stephen, Simon and Whitney Shanfield always had encouraging words for me throughout this process. My parents and my brothers have been a constant source of support during the many years I spent at MIT. I want them to know that my gratitude to them outmatches even that of my long distance carrier – after me, the phone company has been the biggest beneficiary of the close relationship I enjoy with my brothers Mitchell and Neil Flagg, and my new sister-in-law Beth Akler, and my parents, Karen and Stephen Flagg.

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Chapter 1

Introduction: The English Imperative

1.1 Core properties

The imperative in English is often described as a root clause with two crucial identifying characteristics. The first is that the verb surfaces in its bare form; the second is that an overt subject is optional. The data in (1) are illustrative – there is no overt subject in (1a), and the verb BE surfaces in the bare form in both (1a) and (1b).

(1)
a. Be polite!
b. You be polite!

There are further characteristics of the English imperative that demand an account. In negative imperatives with the reduced form of sentential negation, the canonical imperative subject *you*, when present, follows *don't*.

(2)
a. Don't be rude!
b. Don't you be rude!
c. *You don't be rude!

A major puzzle in the syntax of imperative concerns the data in (3) and (4). In negative imperatives with *do not*, and emphatic affirmative imperatives with *do*, the overt subject *you* is disallowed. I will refer to this pattern as the **do (not) subject* puzzle.

(3)
a. Do not be rude!
b. *Do not you be rude!
c. *Do you not be rude!
d. *You do not be rude!

(4)
a. Do be polite!
b. *Do you be polite!
c. *You do be polite!

Attempts to deal with the above data (or some subset thereof) are found in most analyses of English imperative syntax (Potsdam 1998, Rupp 1999, Han 1999, Moon 2001, Platzack and Rosengren 1998, Beukema and Coopmans 1989, Henry 1995, Zhang 1990, 1991 are representative of recent work). In the present work, I focus the inquiry on the theoretical

consequences of a set of counterexamples to the optional subject generalization and on providing a solution to the **do (not) subject* puzzle that extends beyond the imperative clause type to the behavior of negation and emphatic affirmation in the grammar of English more generally.

1.1.1 Major claims

1.1.1.1 An overt subject restriction at LF

In Chapter 2, I provide data that require a revision of the traditional optional subject generalization, as in (5).

(5)
a. Know this poem by heart!
b. *You know the poem by heart!
c. Own *Terms of Endearment* on DVD today!
d. *You own *Terms of Endearment* on DVD today!

These data show that it is not the case that overt subjects are truly optional in imperatives; there are cases in which an overt subject is not permitted at all. Thus, while it is true that overt subjects may always be absent, it is not the case that they are always optionally present. The explanation offered here is that the restriction is due to an interface incompatibility between the syntax of overt subject imperatives and the semantics of certain predicates. In short, the proposal is that the overt subject is licensed in a syntactic phrase projected from an aspectual feature that makes reference to the inception point of the event; in an overt subject imperative, use of a predicate with a semantic representation that does not include an inception point for that feature to pick out leads to a crash at the LF interface.

1.1.1.2 An overt subject restriction at PF

In Chapter 3, I argue that the word order in (2) reflects a surface subject position in imperatives that is lower than the canonical subject position above Tense generally assumed for declarative clauses. Although the *don't*-subject order superficially resembles subject-auxiliary inversion (SAI) in polar interrogatives, I will argue that apparent inversion actually results from the subject surfacing below the base position of *don't* (contra Potsdam 1998). I treat the aspectual conditions on overt subject occurrence as evidence for the intuition in Rupp (1999) that overt subject licensing is related to aspect, and occurs in a position syntactically lower than both Tense and Negation. In this light, with respect to the **do (not) subject* puzzle, I propose that given the proper identification of the subject position in imperatives, only the ungrammaticality of (3b) and

(4b) require special explanation. The subjects in the ungrammatical (3c-d) and (4c) occur higher than the appropriate subject position for (non-contrastive) *you*. The inability of overt subjects to occur under *do* or *do not* in (3)b and (4)b is argued to derive from a specific morphological requirement of the sentential negation head (or its counterpart emphatic affirmation head [Aff] in the same clausal position, the head of ΣP (Laka 1990) for adjacency with the verb. Adjacency is not met in the presence of the intervening overt subject argument. Data from English pseudogapping, in (6), in which the choice of spellout of negation correlates with a contrast in grammaticality just as in the imperative, provides evidence that the proposed PF adjacency requirement is generally active in the grammar of English. I argue that the identical behavior of *not* and *n't* in imperatives and in pseudogapping show that the proposed solution to the **do (not) subject* puzzle is not simply a construction-specific solution to an intractable problem in the imperative, but reflects a generally active condition on morphological licensing of the Σ head.

(6)

a. Although Tony does like steak, he doesn't pizza ~~like t~~$_{pizza}$.
b. *Although Tony does like steak, he does not pizza ~~like t~~$_{pizza}$.
c. Don't you be rude!
d. *Do not you be rude!

In short, what the overt subject imperative and pseudogapping clauses with *not* have in common is that an argument (i.e. *pizza* in (6b) and *you* in (6c)) intervenes between *not* and the verb, disrupting adjacency between [Neg] and the verb. When sentential negation is spelled out *n't,* arguments in the same position do not intervene for the required adjacency relationship, for reasons that will be explicated later. On this approach, the **do (not) subject* is understood as a PF interface crash that derives from argument intervention for the morphological adjacency requirement of the Σ head.

In summary, I approach two major puzzles in English imperative clause structure in terms of interactions between the syntactic representation and conditions imposed at the two interfaces. In what follows in this introductory chapter, I review several recent analyses with respect to the overt subject restrictions that comprise the focus of the dissertation. Against that background, the remainder of the dissertation is dedicated to fleshing out the analyses and arguments briefly sketched directly above.

1.1.2 Background: Previous approaches

Although relatively little attention has been paid to the syntax of English imperatives over the past two decades, there has been a recent resurgence of interest the area. Several recent dissertations offer careful reviews of the history of the treatment of the imperative from a generative grammar perspective. The dissertations of Potsdam (1998), Rupp (1999), Han (1999) and Moon (2001) stand out in this regard. In the following subsections, I will summarize those aspects of the Rupp's and Potsdam's treatments that intersect with the core puzzles of interest in the present work; the above works should be consulted directly as resources for a more complete literature review, including critical responses to prior analyses of imperative syntax that are not directly relevant to the approach developed here.

There are some general observations about the imperative that form the foundation of almost any approach. Most common among these has been the importance of distinguishing imperatives from the variety of clause types that may function pragmatically as directives. Imperatives are said to be directives because they constitute, in some sense, a direction on the part of the speaker for the addressee to take some action or bring about some eventuality. Han (1998) writes of imperatives:

> Canonically, they express the directive illocutionary force associated with commands and requests. Consequently, the term IMPERATIVE has often been used to refer to a sentence's function rather than its form. Any construction that expresses directive meaning is then classified as an imperative, irrespective of its form. For example, all of the sentences [below] would be imperatives because they all have approximately the same illocutionary force of order or request.
>
> a. Wash the dishes!
> b. You will wash the dishes!
> c. Will you wash the dishes, please?
> d. You should wash the dishes!

As does Han, I limit the focus here to those clauses that are formally imperatives, as in her (a) example, setting aside other clause types that are similar only in terms of function rather than in terms of syntax or verbal morphology. Although declaratives with the future modal *will*[1] and deontic *should*, and certain interrogatives, can be used as directives, this comes about through pragmatic inference according to Han, while the directive meaning is part of the semantic content of imperatives. As will be explicated in greater detail below, Han considers the directive

[1] See Copley (2002) for an argument for the modal status of *will*.

force of imperatives to be explicitly encoded by a [directive] feature that is part of the featural makeup of an imperative operator in C.

The distinction between the various syntactic guises through which the pragmatic means of ordering, requesting, suggesting, inviting, advising, etc. may be achieved, on the one hand, and the imperative per se, on the other, is not specific to any particular syntactic treatment of the imperative that I will discuss below.[2] It is a distinction drawn to highlight that the notion imperative is syntactically, rather than pragmatically, defined for the purposes of the investigation. The same distinction is adopted here to delineate the object of inquiry.

Most approaches that accept the traditional optional subject generalization discuss the overt/covert distinction in terms of various special pragmatic functions that the overt subject contributes. For example, it is pointed out that overt subject imperatives are used when speakers wish to highlight their authority over the addressee in the communicative event. Other special meanings attributed to overt subjects include emphasis and impatience. Finally, most researchers notice that the overt subject can also function to contrast the intended addressee with other potential addressees. Examples that crucially involve the contrastive reading of the subject often mark this by an accent diacritic on the subject or by capitalizing the subject to signify stress. It is worth noting, and I will return to this point in the discussion of Potsdam (1998) directly below and in subsequent chapters, that in almost all cases in which overt subject imperatives with non-canonical subject positions are treated as acceptable, the subject obligatorily receives a contrastive interpretation. To take some examples from Rupp (1999), consider the data in (7a-b).

(7)

a. Do EVERYone give it a try!
b. For heaven's sake, of all people, DO YOU give me some support!
c. Girls go into the hall, BOYS don't move!
d. Passengers with luggage don't leave their valuables unattended.[3]

---

[2] It is worth noting that an alternative view exists in the generative semantics tradition in which this distinction is not drawn along the same lines. Attempts were made to directly derive imperatives from associated declaratives with (intuitively) similar meanings via *will*-deletion and optional *you*-deletion from declaratives like *(You)* ~~*will*~~ *wash the car!* (*cf.* Katz and Postal 1964). Leszek (1995) points out a flawed prediction of such an approach in the ungrammaticality of **Go to school and you won't be late again!*, which does not have the meaning of the presumed source *You will go to school and you won't be late again!* Likewise, topically related work in the same tradition took interrogatives that can function as requests as well as information seeking questions to have distinct semantic and syntactic representations – one associated with the question and one with the imperative function. Holmberg (1979), for example, argued against this view of the so-called whimperative and for a view in which the function of requesting was seen as a pragmatic option for certain interrogatives, rather than a clue that they are underlyingly represented as imperatives.

[3] Rupp and Potsdam treat the subjects in (c-d) as a true clause internal imperative subjects, rather than vocatives.

The examples in (7a-b) involve an overt subject after *do*, in apparent contradiction of the **do (not) subject* puzzle. They are, crucially, contrastively focused. The examples in (7c-d) involve subjects before *don't*, also in apparent contradiction of the generalization drawn in (2) regarding word order in overt subject imperatives. These crucially involve contrast as well; *boys* in (c) is stressed, while the subject in the (d) example involves a modifier that contrasts passengers with luggage from those without.

While in my own judgments, and those of other North American English speakers I have consulted, the imperatives in (7) are ungrammatical, they are treated as acceptable by Rupp (1999), who attributes them to Potsdam (1996), where they are in turn attributed to Davies (1986). These authors sometimes ascribe to them a somewhat degraded status, but consider them permissible nonetheless. I submit that, to the extent these data are acceptable, the obligatorily contrastive interpretation of the subject is responsible for the permissibility of the word order; the contrastive subject presumably appears in a focus position higher than the [spec, *v*P] subject position I argue for as the canonical imperative subject position. For now, I suggest that the contrastive use of the imperative subject should be treated separately from the other uses and that the core data set in (1)-(4) should be considered as primary for the purposes of a proposal for the basic syntactic representation of imperatives.

In Chapter 2 it is demonstrated that contrastive subjects behave differently from non-contrastive imperative subjects with respect to both clausal position and the ability to occur in imperatives with predicates that normally disallow overt subjects. The example in (8)c shows that the ban on overt subjects with certain predicates is lifted for contrastive subjects.

(8)

a. Know French, it will help you find a job in Canada!
b. *You know French, it will help you find a job in Canada!
c. No, YOU know French! You're the one who wants a job in Canada, not me.

The examples in (9), I argue, show that when the subject is to be interpreted contrastively, it must survive ellipsis, as in (9)a, but when it is not to be interpreted contrastively, it must be elided, as in (9)b.

(9)

a. Billy didn't tell on me, so don't *(you)!
b. I know you want to tell on me, but don't (*you)! (examples due to Potsdam)

I will suggest that this is a reflex of the higher structural position of the contrastive subject; it seems to occupy a position that is at least higher than the projection targeted for ellipsis. The non-contrastive subjects, on the other hand, occurs lower, within the projection targeted by ellipsis. Essentially, to the extent that subjects have a wider distribution in the imperative than the data in (1-4) suggest, this is due to contrastive focus alone; the canonical, unstressed imperative subject is restricted in the way (1-4) suggest. This has not been explicitly noted in the works I discuss here, but I believe it is the correct generalization about the more liberal data set they adopt with respect to available subject positions.

As a final note with respect to imperative subject possibilities, though I will not be directly concerned with the phenomenon, it has been shown that overt subjects other than the second person pronominal *you* or a null subject with obligatorily 2nd person interpretation are permitted in imperatives. Rupp and Potsdam go to lengths to review the relevant literature and conclude that these are true clause internal subjects rather than clause external vocatives. Their discussions show that non-second person overt subjects are, with few exceptions, generally restricted to those NPs/DPs that can be interpreted as addressees.[4]

Where the most recent treatments diverge from one another is in the specific approaches to the core puzzles outlined in the first section of this chapter. These differences between the various analyses stem both from variations in the technical assumptions of the frameworks adopted by the authors and from the different perspectives the authors take on the data set. For example, Rupp takes the differences between imperatives and interrogatives as a starting point, while Potsdam and Han seek to assimilate imperative and interrogative syntax based on certain word order similarities between the two, though these similarities seem to depend crucially on acceptance of a the wider set of available subject positions as in (7). Han's approach to the imperative is situated within a cross-linguistic perspective; she argues that imperatives contain an operator [IMP] in C with a [directive] feature responsible for their illocutionary force. With respect to negative imperatives, or prohibitions, her approach is based on the observation that prohibitions in many languages have distinctive morphological and syntactic characteristics.

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[4] Potsdam (1998 p. 274) notes that non 2nd person imperative subject can be distinguished from vocatives by the lack of a characteristic intonation break between the subject and do, and by the ability of such subjects to license non 2nd person anaphora. Note the contrast between (i) and (ii), where the subject of the latter is a vocative.

i. SOMEone lend me his jacket, please!

ii. *SOMEone, lend me his jacket.

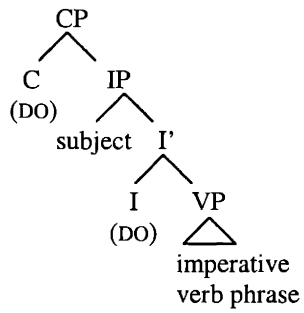
In (ii), *someone* and *his* cannot be coreferential, while in (i) they may be.

Han argues that these characteristics owe to the interaction of [IMP] and negation in the C domain; the [IMP] operator is restricted from occurring in the scope of negation. The syntax of certain languages yields a clause structure in which [IMP] is in the scope of negation; consequently, true negative imperatives are ruled out and prohibitions must be expressed by alternative grammatical means. Moon too provides insight into the semantics of negative imperatives, and develops an approach to the optional subject generalization and range of available subjects in terms of discourse constraints; Moon identifies contexts in which an overt subject is pragmatically odd for a given discourse context. As the insights that emerge from Han's and Moon's work are somewhat orthogonal to the issues I concentrate on here, I limit the following discussion to the accounts of Potsdam and Rupp for the major puzzles identified above.

1.1.2.1 Potsdam (1998)

Potsdam argues that imperative word order conforms to patterns instantiated more generally in finite clauses in the grammar of English; specifically, he aims to assimilate imperative syntax to that of root declaratives and polar interrogatives. The overarching goal of his approach is to show that imperative syntax is unexceptional vis à vis the rest of the grammar of English. This represents an important contribution to thinking about the imperative, given that many earlier treatments resort to construction specific proposals to account for the syntactic characteristics of imperatives (*cf.* Cohen 1976, Schmerling 1977, Akmajian 1984, Beukema and Coopmans 1989, Zhang 1990). Potsdam proposes that the word order possibilities in imperatives derive from movements that are generally active in finite clauses. The structure in (10) illustrates Potsdam's basic approach. Potsdam argues for a picture in which the subject occupies [spec, IP] in imperatives, and *do/don't*, when present occur in either I or C. The subject thus occupies the canonical finite declarative subject position, and *do/don't* (represented as DO) occupy the same range of positions available in finite declaratives and interrogatives.

(10)
a. Don't you leave me!
b. You don't leave me!



Do and *don't* are taken to be emphatic and negative auxiliaries, respectively. Movement of these elements to C in imperatives is taken to relate to an optional feature in C that, when present, attracts items with the semantics of negation and emphatic affirmation. It is crucial for Potsdam that this movement relates to the semantics of the movement-driving C feature so that the movement possibilities in what he calls Formal imperatives, those with *do not*, can be distinguished from those available in the interrogative. Potsdam assumes, following Chomksy (1995), that movement to C in interrogatives is driven by a formal feature, specifically a strong V-feature of Q in C in interrogatives that attracts I to C. I to C movement results in inversion of the subject-DO ordering relative to declarative clauses.

(11)
a. Do you like dogs?
b. Don't you like dogs?
c. Do you not like dogs? (not = sentential negation; Potsdam p.358)

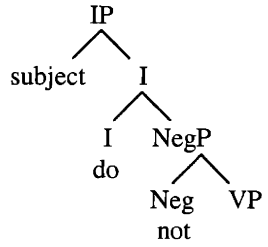
Potsdam must rule out the movement of *do* alone to C in two cases: when the negator *not* is present in the imperative clause and when *do* is not emphatic.

(12)
a. *Do you not like dogs!
b. *Do you like dogs!

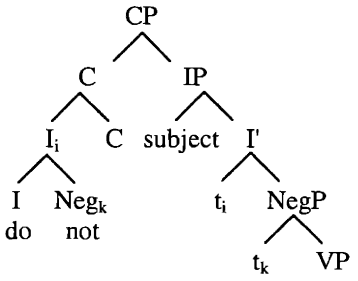
Potsdam's claim is that the only ungrammatical word orders in the imperative arise with an overt subject between *do* and *not*, as in (12)a, or with an overt subject after non-emphatic *do*, as in (12)b, both of which are grammatical in interrogatives. These are disallowed in the imperative because the movement of *do* does not satisfy the semantic conditions on attraction to C since I does not contain negation or affirmation. (13)a illustrates the analysis for grammatical imperatives with *do not*, while (13)b shows the impossible derivation.

(13)

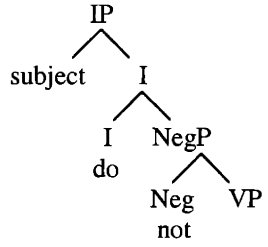
a. Base structure of formal imperatives
Someone do not abandon the gate!



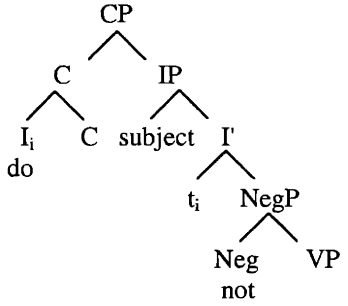
Licit derived structure for formal imperatives
Do not you, of all people, insult me!



b. Base structure of formal imperatives
Someone do not abandon the gate!



Illicit derived structure for formal imperatives
*Do someone not abandon the gate!



It is not immediately clear how (14)a is ruled out on this view, while (14)b is allowed.

(14)

a. *Do not you open that door!
b. Do NOT ANY of you touch that cake!

Potsdam allows for movement of *do not* as a unit to C as in (14) – *not* moves to I first, then I-to-C movement puts an I containing negation into C, which satisfies the semantic condition on raising to C in imperatives. Potsdam relates the imperatives in (14) to what he labels Formal questions, such as in (15).

(15)

a. ?Do not any of you with rural childhoods like dogs?
b. ?Do not any of you who grew up in South Dakota know what a good ear of corn tastes like?

Potsdam argues that the questions in (15) show that *do not* is generally able to move as a unit to C. He notes that the option of raising do not to C in imperatives is seemingly absent when the subject is *you*, but is available with other subjects. Though he doesn't explicitly draw out the facts, the same is true for Formal questions.

(16)

a. *Do not you like dogs?

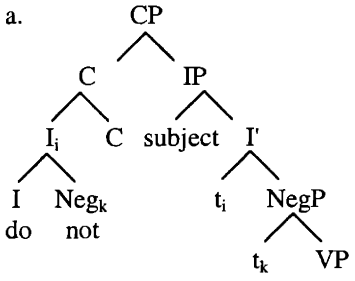
b. *Do not you know what a good ear of corn tastes like?

Formal questions and imperatives both require a particular kind of subject, one that is in some sense heavy. Potsdam alludes to this in his discussion of Formal questions, but the analysis he adopts ultimately obscures this fact, partially because it does not predict any effects of subject size/character on grammaticality.

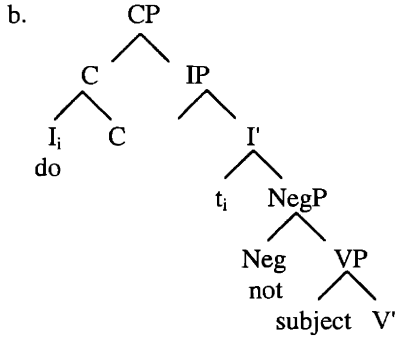
Potsdam considers two possibilities for the representation of Formal questions, one in which the subject raises to the derived [spec, IP] position and *not* raises along with do to C, in (17)a, and another in which the subject never raises out of its base position below negation, in (17)b.

(17)

a.



b.



Potsdam rejects (17)b based on two main pieces of evidence that the subject is not in its base position in Formal questions. He uses examples of Formal questions with subject-oriented floating quantifiers and VP ellipsis to argue that the picture in (17)b is inadequate since, by hypothesis, the subject must have raised to license a floating quantifier or escape deletion.

(18)

a. Will not the supporters of free speech all vehemently protest this outrageous violation of our constitutional rights?

b. John has volunteered to join the search. Will not any of the rest of you ∅?

The data in (18) do seem to argue against the picture in (17)b, but it is not clear that they directly argue for the alternative presented in (17)a. Potsdam presents (17)a as a version of Zwicky and Pullum's (1983) suggestion that that what he labels Formal questions actually involves so-called heavy NP shift, or rightward displacement of the subject. It is worth pointing out that there are other conceivable possibilities for the subject position that do not require us to posit "*do not*-movement" to C. One such approach would shift the subject rightwards, past negation, into a

position associated with a special focus meaning. This could account for the restriction against bare pronominal subjects in Formal questions and imperatives better than (17)a, which offers little insight into why some subjects but not others can occur in clauses in which *do not* raises to C, and about which Potsdam can only suggest that the stylistic option of such movement is simply idiosyncratically restricted.

To fully understand Potsdam's approach to the imperative, it is helpful at this point to take a step back and examine the full data set he considers as inclusive of the word order possibilities for imperatives. The data are given in (19)-(24) below.

(19)
a. Hoist the sails!
b. You take out the trash!
c. Do be more careful!
d. Don't be so selfish!
e. Do not walk on the grass!

(20)
a. Don't you give me any lip!
b. Don't everyone leave!

(21)
a. Those with luggage don't leave it unattended!
b. Girls go into the hall, BOYS don't move!

(22)
a. Do SOMEone help him quickly!
b. Do AT LEAST SOME of you give it a try!
c. SOMEone do answer the phone!
d. Those with children do bring them along!

(23)
a. ?Do not YOU, of all people, insult me in this heinous and base manner!
b. ?Do NOT ANY of you touch that cake!
c. I know I've done wrong but I can't survive on my own
?Oh please, SOMEbody do not desert me!
d. ?SOMEone do not abandon the gate! The fight is not yet lost and we must maintain the security.

(24)
a. *Do somebody not desert me!
b. *Do someone not abandon the gate!

The data include both overt and covert subject imperatives. Potsdam makes the standard assumption that all clauses have a structurally represented subject; the covert subject is taken to

be a 2nd person *pro* (either singular or plural). It is particularly important to note that Potsdam's reliance on the availability of data such as (22) and (23) allows him, in essence, to deny the existence of the **do (not) subject* puzzle. Despite Potsdam's implicit claims to the contrary, I believe that the puzzle stands given that parallel examples with *you* subjects are simply ungrammatical. Potsdam's own example in (14)a makes this clear. The orthographical convention of capitalization of the subjects that Potsdam utilizes strongly suggests that the data in (22) and (23) require a contrastively focused interpretation of the subject, and that to the extent these data are acceptable, obligatory contrastiveness is responsible.

We have already seen how Potsdam rules out (24) in terms of the inability of *do* to raise to C without *not*. Potsdam defends this approach as superior to previous imperative analyses partly on the grounds that it treats *do* and *not* just as these elements are standardly treated in declaratives and interrogatives, rather than ascribing to them exceptional status in the imperative. Potsdam evaluates several analyses that rely on special assumptions about *do not* and/or the **do (not) subject* puzzle in imperatives; I will not repeat the effort here, as his critical review already stands an excellent resource. Instead, I offer a brief characterization of those approaches here based on Potsdam's critiques and refer the reader to his text and the primary sources for further detail.

Schmerling (1977) proposed that do not is a particle, and that some imperatives may be generated by adjunction of that particle to VP. On this approach, there is simply no subject position available in do not imperatives. Examples with an initial subject and *do not*, to the extent they are possible at all, are not explained then, or are predicted not to exist.

Akmajian (1984) proposed that the restriction on the sequence *do not you* reflects a prosodic restriction by which the subject must be the only intonation center preceding the verb in imperatives. This is in conflict, according to Akmajian, with the prosodic requirement that either do or not also be an intonation center in the imperative. There is no way for you to be uniquely stressed when either *do* or *not* must also be stressed, therefore the sequence *do not you* is ruled out in imperatives.

Zhang (1990) objected to Akmajian's account based on data from topicalization in imperatives, which he argued involved two intonational centers before the verb.

(25)
a. The ápples, yóu put in the refrigerator!
b. Thís pie, nóne of you touch!

Potsdam, however, points out that the topicalization data are not appropriate counterevidence to Akmajian's claim because there is reason to believe that the topicalized constituent is in a separate intonational phrase from the one including the subject and verb. If this is so, the ability of the topicalized constituent to be stressed along with the subject is simply not relevant to the restriction against two intonational centers including *do* or *not* and the subject before the verb. Potsdam relies on work by Hale and Selkirk (1987) and Selkirk (1986), who argue that intonational phrases are computed from the right edge of ungoverned maximal projections, to support this idea. With evidence from Baltin (1982) and Lasnik and Saito (1992) that topicalization is best seen as adjunction, and evidence from Chen (1987) that adjuncts form separate intonational phrases because they are ungoverned, Potsdam shows that Zhang's point does not clearly falsify Akmajian's analysis.

Beukema and Coopmans (1989) recruited Case theory for an explanation for the **do not subject* puzzle. They reason that *not* head-adjoins to *do* in C, disrupting government of [spec, IP] by C, and thus blocking case assignment to the subject in [spec, IP]. When *not* cliticizes to *do* as *n't*, on the other hand, government and case assignment proceed unhindered. Beukema and Coopmans assume that this head adjunction of negation is obligatory in order to rule out examples with the order *do subject not* in imperatives. Potsdam points out the undesirability of several stipulations and theory internal inconsistencies upon which the Beukema and Coopmans analysis crucially relies, but in essence, as he points out, ultimately adopts the part of their approach that gives co-occurrence of *do* and *not* in C in formal imperatives. He rejects their claim that case assignment disruption is involved in grammaticality restrictions on formal imperatives.

In summary, Potsdam accepts the standard approach to subject optionality, derives *don't*-subject word order by I-to-C movement, and treats the **do (not) subject* puzzle as an idiosyncratic restriction on *do not* raising as a unit to C when the subject is *you*, but otherwise allows the movement on a par with so-called Formal questions. Whereas Potsdam treats the restriction against *you* with *do not* as an exception to the generally permitted pattern, I suggest the this restriction is a primary datum in need of explanation. The marginally acceptable *do (not) "non-you" subject* data that Potsdam relies on, I will argue, involve a special contrastively focused subject position. On the whole, though, Potsdam's approach represents a significant improvement over the works he reviews in that he seeks to eliminate special, construction-

specific stipulations about the imperative, particularly with respect to the provenance of elements *do not* and *don't*, and seeks to assimilate imperative syntax to the rest of the grammar.

1.1.2.2 Rupp (1999)

Rupp's analysis differs substantially from Potsdam's in terms of her approach to the *don't-subject* word order, as well as in terms of her approach to the **do (not) subject* puzzle. For Rupp, a low structural subject position accounts for the occurrence of *you* below *don't*. The ungrammaticality of a subject below *do not* is argued to result from intervention by negation for checking of the subject's features against uninterpretable φ-features in I. Like Potsdam, Rupp treats the optional subject generalization as a property of the availability of *pro* as a possible imperative subject.

Rupp concludes that imperatives are IP structures at Spell Out, and thus that apparent inversion in the *don't-subject* word order does not arise from interrogative style SAI involving overt movement of *don't* to C. Rather, *don't* is argued to occur in I and the subject in a position below *don't*. Rupp proposes that the subject position is the specifier of a functional phrase between IP and VP, which she tentatively identifies as AspP. As Rupp points out, the appearance of the aspectual auxiliaries HAVE and BE in imperatives is suggestive of the presence of AspP in the representation of imperatives. Furthermore, the occurrence of the overt subject above those auxiliaries, but below *don't*, provides reason to believe that the subject occurs in a projection below I (given that specifier positions below I exist) once arguments are taken into account that *don't* surfaces in I and the subject raises at least out of the VP. Rupp also accepts the more liberal data set with respect to possible subject positions; to deal with these, she states that subjects may raise further to [spec, IP] in imperatives as well.

There are aspects of the technical implementation of the analysis which require comment. When Rupp attempts to reconcile the proposed low subject position with the **do (not) subject* puzzle, she is forced to make certain assumptions and stipulations about feature checking that are not terribly convincing. Specifically, Rupp allows for overt movement of the subject past negation, but proposes that covert movement past negation is disallowed. Let us examine the specific details of Rupp's analysis to see how this works.

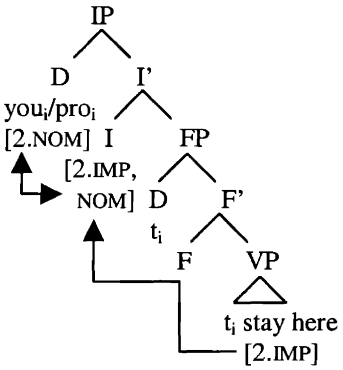
The theoretical framework adopted is early Minimalist Program, as laid out in Chomsky (1989-1995), in which feature checking takes place through (overt and covert) movement. Rupp crucially makes use of two types of movement - either overt phrasal movement that constitutes

substitution into a specifier position, or covert (LF) feature movement that constitutes adjunction to a head position. Rupp assumes that an IMP feature heads IP, identifying the clause as an imperative, and further that I is specified with an uninterpretable 2nd person φ-feature that accounts for the fact that imperative subject pronouns are limited to 2nd person (and that the covert subject is limited to 2nd person interpretation).

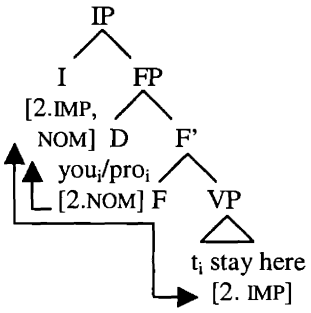
Consider the examples in (26) and corresponding trees in (27).

(26)
a. You stay here!
b. Stay here!

(27)
a. (You) stay here!



b. (You) stay here!



In all cases, the verb is supposed to adjoin to I at LF to check its IMP feature. This raising is taken to be covert since there is no evidence for overt raising, such as order with respect to VP adverbs, for example. There are two possibilities for the position that the subject ends up in. In the first, the subject, *you* or *pro*, raises overtly to [spec, IP] and checks the 2nd person feature of I in a [spec-head] configuration, as in (27)a. Alternatively, the subject raises only as far as [spec, FP], and adjoins to I only at LF to check the 2nd person feature of I, as in (27)b.

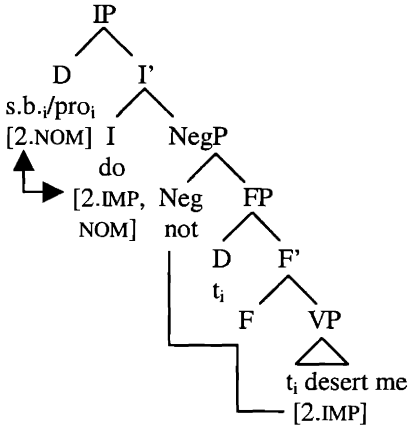
In an imperative with *do not*, Rupp admits the possibilities both of an initial overt subject (28)b and, of course, a covert subject (28)a. Rupp treats an overt *you* after *do not* or between *do* and *you* as ungrammatical (28)c-d, but allows a quantified NP subject after *do not*.

(28)
a. Do not desert me!
b. Somebody do not desert me!
c. *Do not you desert me!
d. *Do you not desert me!
e. Do [not all of you] desert me!

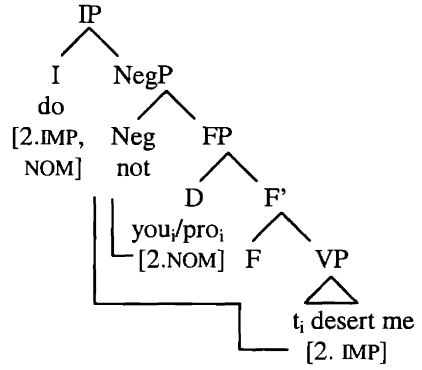
The following trees in (29) illustrate Rupp's analysis of the facts in (28).

(29)

a. (Somebody) do not desert me!



b. *Do you not desert me! (no subject position)
*Do not you desert me! (Neg prevents LF feature raising by subject features to adjoin to I)
?Do not all of you desert me (not sentential negation)



In (29), the subject raises overtly to [spec, IP], where it checks the 2nd person feature of I in a spec-head configuration. Were the subject to raise only to the intermediate [spec, FP] position, however, it would be below [Neg], resulting in the illicit order **do not subject* in (28). What Rupp claims goes awry in this case is that the presence of [Neg] prevents LF adjunction of the subject to I, which prevents checking of the uninterpretable φ-features of I. The illicit word order **Do subject not* in (28)d is simply ruled out by the lack of a subject position between *do* and *not*. Finally, the availability of (28)e, *Do not all of you desert me!* is taken to reflect a structure in which negation is not the head of NegP, but constituent negation on the QNP *all of you*, thus there is no sentential negation head to prevent LF feature checking. In all of these cases, *do* is taken to be a support element that hosts the morphological IMP feature that cannot be checked by LF raising of the verb due to the presence of the intervening [Neg] head.

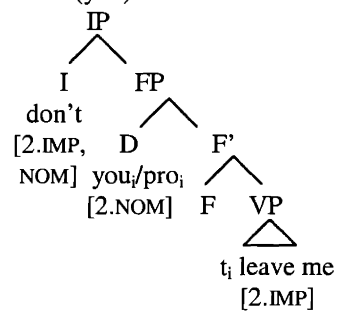
If the presence of negation causes a problem for LF raising of the subject, one might wonder why subjects are permitted below *don't* in imperatives. Rupp's approach is to treat *don't* as a lexically specified negative auxiliary inserted directly into I, with no NegP in the clause. The treatment of emphatic *do* is the same – *do* is treated as a special, lexically emphatic auxiliary inserted directly into I.

(30)

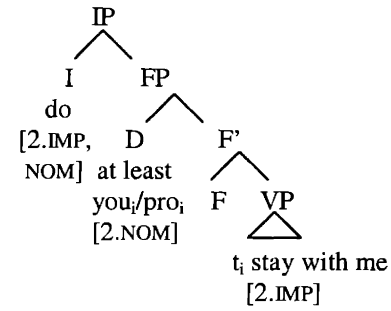
a. Don't leave me!
b. Don't you leave me!
c. Do at least you stay with me!
d. Do stay with me!

(31)

Don't (you) leave me!



Do (at least you) stay with me!



In these cases, the subject may LF adjoin to I, and all feature checking proceeds without disruption, since there is no [Neg] in the structure. This analysis tacitly accepts a treatment of *n't* and the emphatic affirmative semantic material as inflectional affixes (*cf.* Zwicky and Pulllum 1983). This may or may not be a problematic assumption in itself, although in the broader scheme of Rupp's analysis of the imperative, it means that she utilizes two different explanations for the presence of *do* – one, as a support element necessitated by the presence of negation, and another as a part of the specially listed lexical items *don't* and emphatic *do*. Rupp does argue against analyses in which *don't* and *do* are given exceptional syntactic treatment, such as Zhang's (1990) proposal that *don't* is a clause external special imperative marker.

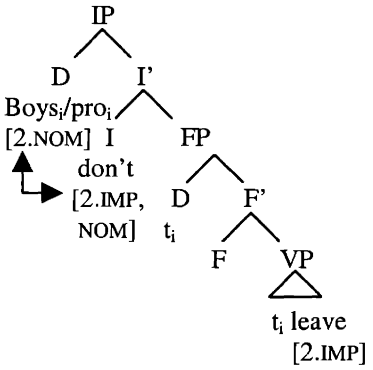
Finally, subjects may raise all the way to [spec, IP] overtly in *don't/do* imperatives for Rupp.

(32)

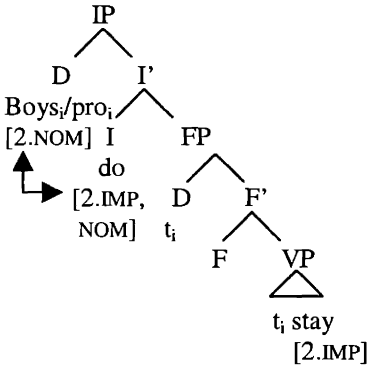
a. Boys don't leave!
b. EVERYbody don't leave!
c. EVERYbody do stay! (should be allowed, though not discussed)

(33)

(Boys) don't leave!



(EVERYbody) don't leave!



Overt subject raising to [spec, IP] simply involves feature checking in a spec-head relation between I and the subject.

In essence, I make use of the same basic approach that Rupp does, though with a slightly different perspective on the data. I too shall argue that the canonical subject position in imperatives is low (although I identify it as [spec, *v*P]), though there are cases in which the subject appears in a higher position, these cases are limited in my approach to subjects with a contrastive interpretation. I argue in Chapter 2 that whenever the subject is contrastive, it appears in a focus position above *v*P; there is one FocP above T and another below T in the imperative. Rupp hints at just such a proposal at the conclusion of her work, but because she does not correlate the alternative subject positions with contrastive versus noncontrastive interpretation, she does not follow it through to the conclusion I draw. Rupp notes that her analysis raises serious questions about why the subject raises only to [spec, AspP] in some cases and but all the way to [spec, IP] in others. She briefly discusses the issue in terms of which heads may carry strong D features to attract the subject, but she ultimately notes that the issue would be more satisfyingly resolved were there some semantic correlation between the interpretive properties of the subjects and their syntactic position, along the lines of Diesing's Mapping Hypothesis (Diesing 1992).

> If in imperatives the different surface subject positions would prove to systematically correlate with specific behavior of their subjects sometimes, the syntactic ordering(s) may partly be associated with semantic factors (cf. also Rizzi's 1997 'split-C' system which includes, among other projections, a syntactic Focus phrase).

In Chapter 2, I will argue in greater detail that just the sort of evidence sought by Rupp exists on the view that the imperative allows two higher subject positions that correlate with contrastive

interpretation above [spec, *v*P]. I also provide the semantic evidence that the non-contrastive subject is indeed licensed in an aspectual phrase, a *v*P projected from an aspectual feature related to event inception, evidence which Rupp was left wanting since her claim that the functional phrase in which the lower subject occurs is AspP was based on syntactic plausibility alone, without any real tie between the low subject and aspectual semantics.

I have not yet gone over the major arguments that Rupp uses to arrive at her analysis, partly because I wish to focus on her approach to the **do (not) subject* puzzle and the variable subject orderings, and partly because some of the arguments turn out to be merely consistent with her approach, rather than strongly conclusive. Where Rupp is most convincing is in her observations of the dissimilarities between interrogatives and imperatives in English. Rupp points out the general problem of a Potsdam-style CP analysis for imperatives based on the lack of parity between interrogative word order possibilities and imperative word order possibilities.

(34) (a-d from Rupp pp. 24-25)

a. Didn't you try again?
b. Don't you try again!
c. Did you not try again?
d. *Do you not try again
e. *Did not you try again!
f. *Do not you try again

In (a) and (b), the interrogative and imperative share a surface word order, but in (c) and (d) the available word orders diverge.[5] In (e-f), imperative and interrogative word order converge again, but the fact that both are ungrammatical certainly does not allow us to draw the conclusion that they share a syntactic representation, nor even that the cause of the ungrammaticality is necessarily the same.

Rupp notices some similarities between imperatives and expletive constructions in English which are also counted as evidence for her analysis. One such similarity has to do with the scope of the imperative subject. With data attributed to Schmerling (1982), Rupp points out that quantificational subjects lack a wide scope subject reading in the imperative (pg. 145), whereas there is scope ambiguity in similar declaratives.

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[5] The interrogative in (c) is taken to represent sentential negation. Some speakers of American English strongly prefer a constituent negation reading of interrogatives in which negation remains in situ and is pronounced *not*, but once the context disambiguates towards the sentential negation reading, they agree it is an available interrogative word order.

i. Did he or did he not mow the lawn? (i.e. not asking 'did he or did he fail to mow the lawn?')
ii. Is that not Massachusetts state law? (i.e. there is no object that is the set of things other than Mass state law)

(35)

a. We all worked extremely hard over the past year, still everyone didn't get a raise.
   i. nobody got a raise EVERY > NOT
   ii. not everyone got a raise NOT > EVERY

b. I know all of you worked extremely hard over the past year, but don't everyone expect a raise.
   i. ≠ nobody expect a raise *EVERY > NOT
   ii. not everyone should expect a raise NOT > EVERY

In the (a) example, the scope ambiguity is assumed to arise through reconstruction of the subject to its base position under negation for the purposes of interpretation. Rupp seems to assume that if the imperative subject has raised to [spec, IP] and *don't* has raised to C in (b), then there should be a reconstructable representation in which the subject c-commands negation prior to head movement of *don't* to C. Since the interpretation that corresponds to that representation is missing, she argues the CP inversion analysis is incorrect.

Two problems for this arguments, however, are that we would have to some reason for expecting head movement to reconstruct, whereas Rupp only shows that reconstruction applies to A-movement with the (a) example.

(36) (Rupp pg. 147)

a. [$_{IP}$ everyone didn't [$_{VP}$ $t_{\sout{everyone}}$ get a raise]]

b. [$_{IP}$ ~~everyone~~ didn't [$_{VP}$ $t_{everyone}$ get a raise]]

Reading (i) comes about through (a), interpreting the QNP in its raised position. Reading (ii) comes about through (b), interpreting the copy left by the QNP.

More importantly, the reading she says is absent in imperatives is also absent in interrogatives.

(37)

a. Didn't everyone get a raise?
   i. Is it the case that nobody got a raise?
   [$_{CP}$ ~~didn't~~ [$_{IP}$ everyone $t_{didn't}$ [$_{VP}$ $t_{\sout{everyone}}$ get a raise]]]
   ii. Is it not the case that everyone got a raise?
   [$_{CP}$ didn't [$_{IP}$ everyone $t_{\sout{didn't}}$ [$_{VP}$ $t_{everyone}$ get a raise]]]

The reading in (i) is not available in interrogatives – seemingly, head movement of *didn't* does not reconstruct.

This does not necessarily make her point unsalvageable, as the absence of the relevant reading from both imperatives and interrogatives cannot be used as evidence that they share the

same structure. However, it certainly isn't a conclusive argument since it is not clear that head movement should reconstruct in the first place.

Rupp further observes that similar scope facts arise in expletive constructions; a quantificational associate does not bear wide scope over negation.

(38)

a. There aren't many students in the class.
   i. ≠ many students are such that they are not in this class *MANY > NOT
   ii. it is not the case that many students are in this class NOT > MANY

By way of explanation for the lack of the wide scope reading, Rupp adopts the idea that when the associate LF raises, it adjoins to I to check features; in the adjoined position it doesn't c-command negation. C-command is required for the wide scope reading, but the LF raising of the quantificational subject would not result in c-command, so the scope of the associate is limited, just as in the imperative.[6]

Rupp (p.200) also presents evidence from expletive constructions that are ungrammatical with *not*.

(39)

a. There isn't anyone watching him.
b. *There is not anyone watching him.

The ungrammaticality of (39)b is supposed to follow from intervention of *not* for LF adjunction of the associate to the I for feature checking, which is the same explanation extended for the ungrammaticality of imperatives with an overt subject below *do not*. With (39)a, on the other hand, it is supposed that there is no Neg head in the structure to intervene. This again amounts to a claim that in addition to a lexically listed negative auxiliary *don't*, there must also be a listed negative copula *isn't* (and, presumably *aren't*, *wasn't*, *weren't*, *hasn't*, *hadn't*, etc. as well). It is still somewhat questionable why the [Neg] head *not* should affect raising of the subject features.[7] In addition, the contrast Rupp reports in (39) does not hold generally with thematic subjects other than *anyone*. The data in (40) do not illustrate the same contrast.

(40)

a. There is not a privacy issue on the internet. (attested example, Alec Marantz p.c.)
b. There isn't a privacy issue on the internet.

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[6] Potsdam (1998, pp. 276-279) also discusses such facts.

[7] Pesetsky (2000, pp. 60-61) actually presents conflicting evidence that feature movement over *n't* is disallowed where the same feature movement over *not* is allowed (in the context of apparent superiority violations in multiple *wh*-questions).

In Chapter 3, I argue that the ungrammaticality of overt subjects imperatives with *not* reflects a PF intervention effect that the subject causes for adjacency of [Neg], not an intervention effect that [Neg] causes for LF raising of the subject. This explanation also extends to another case where *not* is disallowed but *n't* is permitted that Rupp's approach does not predict. One such case arises in pseudogapping with an argument remnant, where *not* is disallowed while *n't* is permitted. The analysis in I propose in Chapter 3 also allows for a uniform treatment of sentential negation such that *don't* and *do not* have a single source, rather than treating *not* as a head that causes *do*-support but *don't* and *dó* as listed auxiliaries. The same reasoning extends to the other *aux+n't* forms that for Rupp must all be listed individually as negative auxiliaries.

In summary, Rupp's account posits a single position for DO (which however treats support *do*, *don't*, and emphatic *dó* as separate entities), and two possible subject positions. However, the approach to the **do (not) subject* puzzle is somewhat stipulative; the alternative I propose captures the **do (not) subject* restriction and other *not/n't* asymmetries in English as well. Rupp's assumptions about the differences between *dó*, *do not* and *don't* are also required to do a lot of work in her system, while a more desirable treatment would be to relate all instances of DO to the same source. Rupp does provide arguments that these elements are all syntactically identical in distribution, occurring in I, with an excellent critical response to earlier treatments that ascribe special status to *do/don't* as special imperative markers with exceptional syntactic positioning. These counterarguments are beyond the scope of the present discussion, but represent a significant contribution that the interested reader should consult.

1.2 Theoretical Background

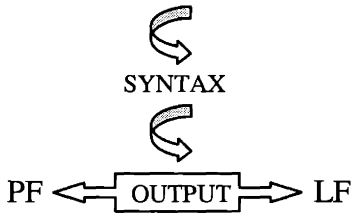
In this section, I provide some background material to contextualize the characterization of the proposed analyses of the **do (not) subject* puzzle and the restriction against overt subjects in stative imperatives in terms of ineffability at the PF and LF interfaces, respectively. The basic approach within which the analyses are situated is the Minimalist framework as articulated by Chomsky over the last decade.

A central innovation in contemporary syntactic theory within the Minimalist framework (as laid out in Chomsky 1993, 1995, 2000, 2001a, 2001b) has been a shift away from explanation in terms of grammatical principles that apply at various levels of representation to filter illicit derivations generated by the computational system, and towards a model of the grammar in which it is in the very nature of the computational system to generate well-formed linguistic

expressions that are interpretable by the performance systems – the sensorimotor and thought systems – of the mind/brain. The computational system, essentially the language faculty, is taken to be designed to meet conditions imposed by the performance systems themselves; derivations are only legible for the purposes of these systems if they conform to particular specifications. To take a specific example of the shift in thinking, from the perspective of GB theory, the computational system included an unrestricted movement operation, Move-α, generally responsible for the displacement of grammatical elements. Because Move-α itself was unrestricted in terms of both which elements it applied to and the position to which any given element could be displaced, additional principles had to be posited, in the form of grammatical filters like Subjacency, Case Theory, or the Head Movement Constraint, to limit possible (sets of) movements to those that yielded all and only grammatical outputs. In a Minimalist approach, locality conditions on displacement are built into the operation(s) yielding movement (i.e. the feature checking operation Agree and (Internal) Merge), and independent principles governing Case are not only obsolete, but superfluous, since failure to check case features results in an interface crash due to the presence of an uninterpretable case feature in the syntactic representation.

I assume a model of the grammar in which the output of the computational system, the narrow syntax, is a syntactic derivation that serves as input to the PF component (the sensorimotor interface) and the LF component (the conceptual-intentional interface). Bobaljik (2002) illustrates such a model as in (41).

(41)



The OUTPUT is a syntactic object built up through the recursive operation Merger, applied to Lexical Items – bundles of formal features – drawn from a universal set; it has been argued that the locus of cross-linguistic variation is in the particular feature bundles that each language makes use of. Relationships between items are established through the operation Agree, which checks or matches the (relevant) features of distinct Lexical Items and can be followed up by displacement of one of the involved Lexical Items. In Chapter 3, I argue for a position in which

phrasal movement – i.e. displacement of arguments and A'-movement to specifier positions, both based on prior establishment of Agree – occurs in the SYNTAX, while head movement – i.e. displacement of heads based on prior establishment of Agree – occurs in the PF component.

1.2.1 The Interfaces

From a Minimalist perspective, then, there is a single point of access between the faculty of language and the performance systems of the mind/brain. Linguistic expressions, according to Chomsky, can be thought of as pairings of sound and meaning, EXP = <PHON, SEM>, derived from a single representation created by the computational system. Chomsky (MI) states that "[t]heories of PF and LF seek to spell out the nature of PHON and SEM." PF essentially stands for PHON, in that the theory of PF is typically treated as the theory of the mapping from the narrow syntax to a Phonetic Form by operations in the PF component. LF, on the other hand, is not similarly intended to represent SEM; rather, it is best understood as the output of the narrow syntax that is used for semantic interpretation, i.e. mapped to SEM. On this view there is no LF representation per se since the same representation serves as input to both the PF and LF components.

1.2.1.1 LF ineffability

An explanation of ungrammaticality in terms of ineffability at LF in this work is specifically related to the mapping to SEM at the interface between the narrow syntax and the conceptual-intentional system of the mind/brain. Quite simply, when the output of the syntax cannot be mapped to a coherent SEM, a crash occurs at the LF interface. I take one possible such failure to be a case in which the representation of the meaning of a predicate, as stored in the conceptual-intentional system, is incompatible with semantic information present in the syntactic representation: the case of an overt subject imperative built on a stative predicate. The conflict is not in the syntax, but in the computation of a meaning representation for the syntax relative to a particular predicate. In Chapter 2, I propose that an otherwise well-formed imperative clause can be ruled out at the LF interface when the syntactic feature [+start] that licenses the overt subject co-occurs with a stative predicate.

1.2.1.2 PF ineffability

The proposed solution for the **do (not) subject* puzzle is couched in terms of ineffability at the PF interface. In this case, a well-formed syntactic input to PF may constitute an ill-formed

configuration for the purposes of operations in the PF component. In Chapter 3, I propose one such operation is Adjacency Assessment, in which a given morpheme must establish a particular local structural relationship with another morpheme; overt subject imperatives with *do (not)* represent a case in which the subject in [spec, *v*P] prevents the establishment of Adjacency between the polarity head and *v*. Failure to establish Adjacency essentially halts the mapping to Phonetic Form. I assume that Vocabulary Items, the phonological exponents of morphemes *qua* feature bundles, are inserted in the PF component (in the sense of a realizational theory such as Distributed Morphology). However, Vocabulary Insertion can be derailed if a required (structural, though non-syntactic) morphological dependency relationship between morphemes, such as an Adjacency requirement, fails to obtain in the PF component; it is in this sense that ineffability at the PF interface results.

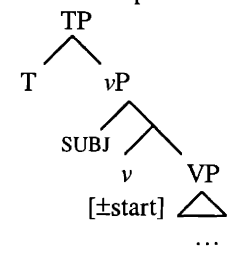
Chapter 2: An overt subject restriction at LF*

Overview

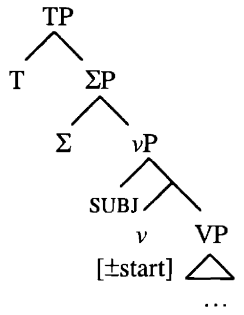
I argue for (1) as the basic structure of the English imperative.

(1)

a. neutral imperative



b. non-neutral/formal imperative



The syntactic structure in (1)a corresponds to imperatives like those in (2), while (1)b corresponds to imperatives like those in (3).

(2)

a. Wake up!
b. You go to sleep!

(3)

a. Don't (you) sit down!
b. Do not sit down!
c. Do sit down!

Notably, the subject occupies a lower structural position than the canonical [spec, TP] subject position in English; on this count, I am broadly in agreement with Rupp (1999) about the basic imperative clause structure as far as subject licensing in a functional projection below T is concerned. In this chapter, I provide semantic evidence of the sort sought by Rupp that subject licensing is indeed related to aspect, although I do not adopt her view that the subject occurs in the specifier of an independent AspP. I propose that the subject in imperatives is licensed in the specifier of a *v*P projected from the feature [start], an aspectual feature related to event inception, and only raises from its base position when the EPP feature of an independently motivated higher functional projection attracts it. The [+start] value licenses the overt subject *you*, while the [-start] value licenses the covert subject *pro*. The correlation between overt subject licensing

* Portions of this chapter have appeared as Flagg (2001) in the proceedings of CLS 37.

and the positive value of the [start] feature provides insight into data introduced in this chapter that show that the overt subject is barred with imperatives built on stative predicates. I propose that the unavailability of the overt subject in imperatives with stative predicates ultimately stems from ineffability at LF; because the representation of stative predicates does not include reference to event inception, the [+start] feature that licenses the overt subject has no corresponding inception point in the semantic representation of the predicate, preventing the assignment of a coherent semantics to the output of the syntactic computation.

Rupp extends her account, based on data in which the subject appears to occupy a position higher than T, by proposing optional subject raising to [spec, TP] in the imperative for such cases. It is not entirely clear, however, why Rupp's T need not always attract the subject. Taking a different tack, I observe that subjects that appear to occur higher in the structure than T are obligatorily contrastively interpreted. The strong connection between interpretation and position suggests that a characterization in terms of optional movement to [spec, TP] may be flawed. I argue that the higher alternative subject position in the imperative, because it is obligatorily associated with contrastive interpretation, reflects licensing in a focus position, and that the T in imperatives never licenses the subject in its specifier. By extension, all subjects with a contrastive interpretation are taken here to occur in a focus position. I propose an approach in which only the unstressed overt subject *you* and the null subject are licensed in [spec, *v*P], while other subjects appear in one of (at least) two alternative positions: a Focus Phrase located above TP or a Focus Phrase between TP and *v*P. Some conditions on the distribution of contrastive subjects in the two focus positions are noted, but the only clear generalization to emerge holds that contrastive *you* is restricted from appearing in the highest Focus Phrase in imperatives.

In this chapter, I motivate the connection between non-contrastive subject licensing and aspect, and develop a treatment of imperative clause structure from the perspective of a low subject position for the non-contrastive subjects *pro* and *you*, and two higher subject positions associated with contrastive overt subjects. After laying out the core data, I explore the hypothesis that overt/covert subject distinction in neutral imperatives correlates with a subtle meaning difference that can be described in terms of aspectual semantics. I propose that the overt subject imperative with non-contrastive *you* picks out the inception point of the activity ordered by the directive, while the covert subject imperative does not make reference to a

starting point. In some cases, the explicit grammatical reference to the point of inception functions pragmatically to order immediate initiation of the relevant activity. The subject in imperatives is taken to be licensed in the specifier of a phrase projected from an aspectual feature, [start], that relates to event inception; the overt subject is licensed by the [+start] value of the feature, while the covert subject is licensed by the [-start] value.[8] Identification of the head that licenses the overt subject as [+start] not only sheds light on the meaning difference between overt and covert subject imperatives and the range of pragmatic uses of the overt subject imperative, but also predicts a restriction against overt subject imperatives with stative predicates.

The [±start] feature can be taken to project a type of *v*P; thus, a subject that occurs and is licensed in its specifier occupies a lower structural position than the [spec, TP] position generally assumed for subjects in other clause types. The hypothesized low subject position explains both the basic imperative word order and the difference between available word orders in imperatives and polar interrogatives, despite a surface similarity between the two when *don't* appears in the clause.

Section 2.3 deals with the overt subject restriction with stative predicates. I argue that the restriction stems from an incompatibility between the [+start] feature that licenses the overt subject and the semantic representation of those predicates at LF. The feature [±start] relates to event inception; it is not unlike the upper aspect head of Borer (1998), which relates the agent role with the starting point of an event. In this sense, licensing of the imperative subject in the phrase projected from an aspectual feature that relates to inception is not arbitrary. I propose that the semantic representation of statives does not include an inception point, but that the [+start] feature must correspond to such a point in the LF computation of meaning. The presence of the overt subject implies the presence of [+start]. Therefore, the restriction against overt subjects in imperatives built on stative predicates reflects ineffability at the LF-interface, where the meaning representation of the predicate is incompatible with the syntactic context in which it is embedded. Only when *you* is contrastive, and thus not licensed by [+start] in [spec, *v*P], can stative predicates co-occur with an overt subject in the imperative. Contrastive *you* is taken to occur in the focus position between TP and *v*P.

[8] An overt imperative subject may appear in the specifier of a [-start] *v* if it will ultimately be licensed in a contrastive focus position – see the discussion in section 2.5.1.

2.1 Data

The initial focus here will be on the difference between the imperatives in (4), though there are many interesting aspects of the question of where and when an overt subject can occur in the English imperative, as the data in (5)-(7) illustrate.

(4)
a. You sit down!
b. Sit down!

(5)
a. Don't sit down!
b. Don't you sit down!
c. *You don't sit down!

(6)
a. Do not sit down!
b. *You do not sit down!
c. *Do you not sit down!
d. *Do not you sit down!

(7)
a. Do sit down!
b. *Do you sit down!
c. *You do sit down!

The unstressed overt subject *you* is ruled out above *don't* in (5)c; above, below, and between *do not* in (6)b-d; and above and below *do*, in (7)b-c. The ungrammaticality of (6)d and (7)b, the **do (not) you* puzzle, is treated in Chapter 3. The other restrictions are treated in this chapter as consequences of the low structural subject position in the imperative.

2.1.1 Cluster of features

2.1.1.1 Covert subject

The distinction between the neutral imperatives in (4)a-b is typically described in terms of the optionality of the subject in English imperative. The term optionality is actually used to refer to the overt/covert distinction, rather than to suggest a difference in the presence or absence of a subject in the structural representation. The covert subject can be taken to be a null argument specified for 2nd person ϕ-features. Like its overt counterpart, it is compatible with a singular or plural interpretation. Some of the typical arguments for a structurally represented subject in the imperative, even in the absence of a phonologically overt subject, are illustrated in (8). The

literature typically calls upon evidence from binding in (b-c), the anaphoric relation in (d), and the tag question in (e).

(8) "Optional" subjects: covert subject is structurally represented

a. *pro* buy some shoes!	*(2nd person interpretation)*
b. *pro* buy yourself/*you some shoes!	*(binding)*
c. *pro* buy yourself/*himself some shoes!	*(binding)*
d. *pro* use your own/*his own comb!	*(anaphoric rel.)*
e. *pro* pour the wine, would you/*would he?	*(tag Q)*

These facts match the effects that would be found if *pro* were replaced with the overt subject *you* throughout (8). In what follows, I will assume that the covert subject is a *pro* with a second person feature and either a singular or plural number feature.

2.1.1.2 Relative position of subject

In terms of linear order, the imperative subject occurs below support-*do* and negation, as (9) shows, but above any overt auxiliaries, as in (10) and (11).

(9)
a. Don't you sit down!
b. *You don't sit down!

(10)
a. Be waiting on the corner for the bus!
b. You be waiting on the corner for the bus!
c. Don't be waiting on the corner for the bus!
d. Don't you be waiting on the corner for the bus!

(11)
a. Have washed the dishes by the time I get home!
b. You have washed the dishes before I get home!
c. Don't have washed the dishes by the time I get home!
d. Don't you have washed the dishes by the time I get home!

Auxiliaries do not raise in the imperative; unlike in declaratives, they occur below sentential negation. In the negative imperatives in (12)-(13), *do*-support co-occurs with *have* and *be*, while in the negative declaratives in (14)-(15), *do*-support is barred with *have* and *be*.

(12)
a. Don't have washed the dishes before your lazy roommate gets home!
b. *Haven't washed the dishes before your lazy roommate gets home!

(13)
a. Don't be waiting on the corner alone at night!
b. *Aren't waiting on the corner alone at night!

(14)
a. *Flap didn't have washed the dishes.
b. Flap hadn't washed the dishes.

(15)
a. *Flap didn't be waiting on the corner!
b. Flap wasn't waiting on the corner!

I adopt the now standard Pollockian assumption that in the declaratives in (14)-(15), the auxiliaries *have* and *be* raise to T, where they host the realization of the tense affix; auxiliary raising blocks *do*-support. In the imperatives in (12)-(13), the auxiliaries are apparently unable to raise, resulting in obligatory *do*-support due to the presence of the sentential negation head.[9] Auxiliaries in the imperative mirror the behavior of main verbs in declaratives, as the parallels with (16) show.

(16)
a. Flap did not speak to Emma.
b. *Flap spoken't to Emma.

As (16)b indicates, main verbs do not raise to T in English; when tense lowering to the verb is blocked, as it is due to the presence of negation in (16)a, *do*-support is required. [10] Obligatory *do*-support with auxiliaries in negative imperatives suggests that imperative T is featurally weak in the sense that it lacks the relevant feature that attracts auxiliaries (see fn. 2). I will suggest below that the low surface subject position also relates to the impoverished feature content of T; T does not attract the subject to its specifier in the imperative.

[9] In Chapter 3 I argue that auxiliary raising instantiates PF head movement of the auxiliary to T, with which it entered into an Agree relationship in the syntax. Agree between T and v_{AUX} is not sufficient for head movement at PF; v must be specified as a raising head. Because auxiliaries are specified to raise at PF in English, lack of auxiliary raising can be taken to reflect lack of Agree between T and v in imperatives. Since Agree is presumably driven by a feature of T, it can be assumed that imperative T lacks the feature that initiates the Agree relation.

[10] On current standard assumptions, the sentential negation head blocks lowering of the tense affix to the verb. In Chapter 3, extending a proposal in Embick and Noyer (2001), I develop an approach in which *do*-support occurs when T is not structurally adjacent to v at PF; one such case arises when the sister of T is NegP.

2.1.1.3 Imperative ≠ interrogative

Despite a surface similarity between imperatives and polar interrogatives in examples like (9) above, there are some crucial differences between the two clause types. The *don't-you* word order in imperatives superficially resembles subject auxiliary inversion (SAI) in interrogatives.

(17)
a. Don't you answer the telephone?
b. Don't you answer the telephone!

However, when negation takes the form *not*, the word order in the interrogative corresponding to (17)a is not available in the imperative.

(18)
a. Do you not answer the telephone?
b. *Do you not answer the telephone!

There is some disagreement in the literature as to whether *not* (18)a can be interpreted with sentential scope or whether it can only be interpreted as constituent negation on the verb phrase. I maintain that the sentential negation reading is indeed available. The sentential negation reading of negative polar interrogatives with *not* emerges more strongly in (19).

(19) Do you or do you not [$_{vP}$ answer the telephone]?

If *not* in (18)a represented constituent negation only, then (19) would parallel the rather strange (20)a, the predicted counterpart to the constituent negation parse of (19), as in (20)b.[11]

(20)
a. Do you or do you [$_{vP}$ want to leave]?
b. *Do you or do you [$_{vP}$ not [$_{vP}$ answer the telephone]]?

I take the contrast in grammaticality between (18)a and (18)b as evidence that imperatives and interrogatives differ structurally. A similar contrast in grammaticality of the same word order in an imperative and interrogative is evident in (21).

(21)
a. Do you answer the telephone?
b. *Do you answer the telephone!

Neither imperatives nor interrogatives permit the sequence *do not you*, as (22) illustrates.

[11] I also reject the possibility that (19) involves Right Node Raising. Since RNR should require the *v*Ps to be identical, the representation with constituent negation is not a licit input structure
i. Do you [$_{vP}$ ~~answer the phone~~] or do you [$_{vP}$ not answer the phone]?

(22)
a. *Do not you answer the telephone?
b. *Do not you answer the telephone!

In chapter 3, I will argue that the ungrammaticality of (22)a and b stems from different sources, but that the ungrammaticality of the imperatives in (21)b and (22)b stem from a common source, an intervention effect of the subject in its low position.

2.1.2 General approach

The unavailability of the same word order in interrogatives and imperatives in (22) should not be taken to constitute evidence for a common structure, but the contrast in grammaticality of the same word order in the two clause types in, e.g. (21), can reasonably be taken as evidence that they differ structurally. In Section 2.5, I argue that imperative syntax owes its major characteristics to the low subject position and an impoverishment of the featural content of T relative to other English clause types. The overarching goal is to make no special assumptions about the other elements of the imperative clause, but rather to attribute to the nature and position of *do*, negation, and the verb the same status as elsewhere in the grammar.

2.2 The overt/covert subject distinction

Traditionally, the difference between overt subject and covert subject imperatives has been treated in terms of special added meanings or usages of imperatives contributed by the overt subject. In this section, I introduce new data that show that these previous characterizations are insufficient in the face of evidence that some imperatives disallow overt subjects. There is no obvious reason why the characterized added meanings should not be expressible in these imperatives, yet the overt subject is not permitted. I suggest that a superior approach to the overt/covert distinction is one in which the additional meanings attributed to the overt subject follow from the nature of the overt subject-licensing feature, which itself is independently identified with respect to the restriction against overt subjects with stative predicates. I outline a proposal in which the overt subject is licensed by one value of an aspectual feature; the semantic content of this feature accounts for the set of special uses of overt subject imperatives. This feature is incompatible with certain predicates, and thus overt subjects may not occur with those predicates in the imperative. The one exception to this generalization arises with contrastively focused subjects. This exception suggests that contrastive subjects are not licensed by the same

feature as non-contrastive subjects, but rather raise to and get licensed in a different structural position.

2.2.1 History: The pragmatic contribution of "you"

In this section, I lay out the most common approach to the meaning difference between overt and covert imperatives, under which the two are used for different pragmatic purposes, and the special pragmatic uses of the overt subject imperative are attributed to the presence of *you* itself. The observations in the literature from the pragmatic approach identify a variety of uses of *you* that are related to speaker affect, on one hand, and a contrastive interpretation of the overt subject *you*, on the other. It is the former set of uses we are interested in for present purposes. I will return to the contrastive use of the overt subject in section 2.4.

To briefly survey some typical characterizations of the meaning of the overt subject imperative relative to the covert subject counterpart, in (23) I summarize the special meaning contributions that have been attributed to the overt subject in other work.

(23)

a. admonition, strong irritation, insistence, persuasion (Quirk et al. (1985))
b. emphasis (Henry (1995); Potsdam (1998))
c. strong irritation, impatient hearer-directed anger, bullying, aggression, impatience, amicable encouragement, comforting reassurance (Davies (1986)

In their grammar of English, Quirk et al. (1985) say that *you* contributes a meaning of admonition, strong irritation, insistence or persuasion to the imperative. Henry (1995) suggests that *you* contributes emphasis; Potsdam (1998) also mentions emphasis in relation to the overt subject. Finally, Davies (1986) surveys many previous characterizations of the contribution of *you* in the imperative, and finds that the wide variety of special meanings listed above in (23) have been attributed to *you*. Davies proposes in turn that these uses all follow from the "speaker [...] laying claim to a certain authority over his addressee." She attempts to derive the many possible contributions of *you* from the various purposes for which a speaker might emphasize his or her authority, for example when expressing irritation while issuing a command to a subordinate.

On the view represented by the above pragmatic approach, the use of an overt subject contributes special meaning to the imperative. These theories all seem to share the intuition that *you* itself that marks emphasis, irritation, etc. in the overt subject imperative, and while this intuition is difficult to state formally, it seems intuitively appealing. There are, however, data

that incompatible with an apparent prediction of the basic intuition, however it is formalized. Since a pragmatic approach attributes the extra layer(s) of meaning of the overt subject imperative to various special meanings that *you* contributes, the prediction is that it should be possible to use an overt subject with any verb in the imperative for the purposes identified in (23). In the next section, I show that this prediction is not borne out, following which, I offer an alternative account of the relevant examples and try to show how the alternative can still capture what is appealing about the preceding characterizations.

2.2.2 Present: Why "you" can't say that

Contrary to the prediction of the pragmatic approach, there are verbs for which the overt subject imperative is ungrammatical, while the covert subject counterpart is fine. Therefore, *you* itself cannot contribute the meanings in (23)a-c. If *you* itself contributes special meanings that reflect various sorts of speaker affect, it should, in principle, be compatible with any verb in the imperative. There is no obvious reason that speakers should be unable to express emphasis, irritation, impatience, authority, etc. with any verb in the imperative. However, there are some verbs with which an (unstressed, non-contrastive) overt subject cannot occur in the imperative. In this section I introduce the data that illustrate this restriction on overt subjects in the imperative to show that it cannot be the case that *you* itself contributes special meaning in the imperative.

2.2.2.1 Barred "you"

The data below illustrate a restriction against overt subjects in neutral imperatives with certain predicates; to my knowledge, the contrasts have not been previously noted in the literature. A contrast in grammaticality due solely to the presence of an overt subject is unexpected given the traditional generalization in the literature that overt subjects are optional, and can simply be put to use to achieve particular pragmatic goals. Consider the contrasts in (24) and (25).

(24)
a. Know your rights and responsibilities!
b. *You know your rights and responsibilities!

(25)
a. Own it on video and Disney DVD![12]
b. *You own it on video and Disney DVD!

[12] 2001 TV commercial advertising the children's movie "102 Dalmatians."

While (24)a is a grammatical imperative, its overt subject counterpart in (24)b is not. Likewise, (25)a is fine, while (25)b is robustly judged to be ungrammatical.

Crucially, the examples in (24)a and (25)a must be read with a non-contrastive interpretation of the subject. The contrastive use of the subject does not show the same restriction. In (26) we see that the restriction against the overt subject imperative in (24)a is suspended when the overt subject is read contrastively.

(26)
A: Know your rights and responsibilities.
B: No, YOU know your rights and responsibilities.

Speaker B's retort to speaker A in (26) is a grammatical utterance. In this case, *you* is focused - it carries contrastive stress and interpretation (i.e. *you*, speaker A, as opposed to *me*, speaker B).

Some further examples of the restriction against non-contrastive overt subjects are given in (27). For comparison, the imperatives in (28) are not subject to the same restriction.

(27)
a. *You love your new dog!
b. Love your new dog!
c. *You owe money at the time of your death!
d. Owe money at the time of your death!
e. *You inspire others to come out of their shells!
f. Inspire others to come out of their shells!

(28)
a. You be quiet!
b. Be quiet!
c. You share your toys with your brother!
d. Share your toys with your brother!
e. You help yourself to the scotch!
f. Help yourself to the scotch!

The data in (24), (25), and (27) illustrate a restriction on overt subjects that is unexpected from the point of view of the pragmatic approach. Why shouldn't a speaker be able to emphatically or impatiently insist that the addressee know her rights and responsibilities by adding *you*, if *you* marks emphasis, impatience, etc? I propose that it is because *you* itself is not responsible for those meanings. These data bring up some new question for the overt/covert subject distinction. Why are some verbs restricted from occurring in overt subject imperatives? Which verbs are subject to the restriction? How can we characterize the meaning of the overt subject imperative in such a way that it follows that certain verbs are incompatible with it? In the next section, I

propose a new way of looking at the meaning difference between overt and covert subject imperatives that explains why some verbs but not others are incompatible with overt subject imperatives. I suggest that what these verbs have in common is their semantic representation as statives without explicitly represented starting points.

2.2.3 Future: History and the present meet "you"

I begin this new approach from the intuition that overt subject imperatives seem to request the immediate initiation of the directive on the part of the addressee. Consider the overt subject imperatives in (29).

(29)
a. You sit down and do your work!
b. You sit down and have a cup of tea!

For example, if a teacher says (29)a to a student, it is clear that this carries the meaning that the student should sit immediately. Similarly, if a host says (29)b to a guest in the home, there is also the sense that the host wants the guest to sit right away, though in this case the intention is to accommodate the guest, not to force the guest to perform a required action, as in (29)a. The two cases differ in the purposes for which the overt subject imperative is chosen, yet share the sense that the speaker desires immediate compliance on the part of the addressee.

Covert subject imperatives do not seem to specifically require the immediate initiation of the event, though they may of course be used to do so. Extralinguistic situational information or temporal modifiers can make clear that the order is for immediate compliance. This can be seen in the examples in (30).

(30)
a. Get down on the ground!
b. Turn off the television right now!

If a police officer screams (30)a at a suspect[13], it is clear in the context that the suspect is meant to get down on the ground immediately. When a parent says (30)b to a child, *right now* contributes the information that the action should be initiated immediately. However, this information is made available in the covert subject imperative differently from the way it becomes part of the meaning of overt subject imperative.

[13] This a regular occurrence on the television show COPS (Fox network).

Covert subject imperatives seem neutral with respect to the speakers expectations regarding the precise point of initiation of the directive; typically, the focus is on completion.

(31)
a. Visit the Louvre!
b. Send me a postcard!

My claim is that the reference to the point of initiation of the event is encoded in the syntax of the overt subject imperative clause. I turn to this claim in the next subsection.

Interestingly, the intuition that overt subject imperatives order immediate initiation can explain the felicity conditions for the imperatives in (32).

(32)
a. Keep doing your homework!
b. You keep doing your homework![14]

Imagine a situation in which a child is sitting at the kitchen table doing homework when the doorbell rings. If the child shows no sign of stopping as the parent goes to answer the door, the parent can say (32)a as a word of encouragement, but not (32)b, which sounds odd for that situation. However, if the child stops doing the homework, or even shows signs of being about to stop, (32)b becomes appropriate in this slightly modified situation. This is because it is odd to order the initiation of an event that is in progress, in the first situation, but in the second situation, where the homework-doing event is (about to be) interrupted, the imperative orders the re-initiation of the homework doing event. I will explain this contrast, and the contrasts in (27), further in the remainder of this section.

2.2.3.1 Overt subject imperatives and immediate initiation

A new characterization of the meaning of the overt subject imperative is given in (33).

(33) The starting point of the action/event being ordered is explicitly picked out when an overt subject is present in the imperative

When the covert subject is used, no explicit reference is made to the starting point of the action/event, though reference to this point may be made by other means (*cf.*(30)). This new

[14] I assume that the subject is licensed in the specifier of the verb *do*, although it is further attracted to the specifier of the aspectual semi-modal *keep*. In this vein, the subject always raises to the highest aspectual head, presumably to satisfy an EPP requirement, as in (i).
i. You be doing your homework when I get home!

characterization of the overt subject/covert subject distinction in imperatives reflects an aspectual distinction with respect to the point of inception.

2.3 The connection with Aspect

My proposal is that the meaning difference between overt and covert subject imperatives stems from a syntactically represented aspectual feature that projects the phrase in which the subject is licensed. Overt subjects appear in imperative clauses with the value of the feature that specifically picks out event inception.

2.3.1 Immediate initiation in the syntax: a [+start] Aspectual feature

The proposal is that the overt subject is licensed by the aspectual feature [+start].[15]

(34) [+start] vP licenses you; [-start] licenses pro[16]

At LF, this feature must correspond to the inception point in the semantic representation of the predicate used in the imperative clause. Verbs with a semantic representation that lacks a point of inception, then, are incompatible with an overt subject in the imperative on this approach, because the semantic representation lacks an inception point for the [+start] feature in the syntax to pick out. We have seen such cases in (24), (25), and (27). In the following subsection, I turn to the proper identification of the class of predicates whose semantic representation is incompatible with a syntactic structure that contains [+start].

2.3.2 Categorizing verbs incompatible with "you"

2.3.2.1 Predicates without a starting point

I suggest that the relevant class of predicates that lack a semantically represented inception point can be identified as statives.

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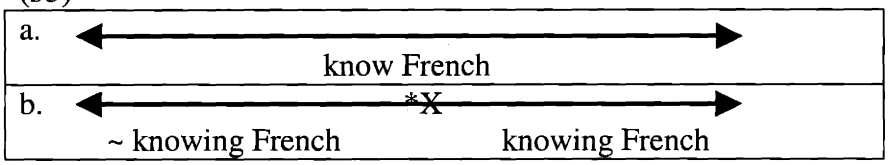
[15] For [start]-related aspectual features in and around *v*P see Borer (1998) and (Travis 2000); on the syntax and semantics of *v*P more generally see Kratzer (1996) and Chomsky (1995, 2000, 2001a,b).

[16] I represent the licenser of the covert *pro* subject as [-start], though I leave undecided at this point whether [-start] represents a value of the [start] feature that encodes neutrality with respect to inception, or the unmarked value of the [start] feature in *v*P.

Take the stative predicate *know*, for example. The picture in (35)a is intended to approximate the linguistic representation of a knowledge state; minimally, it holds within some interval.

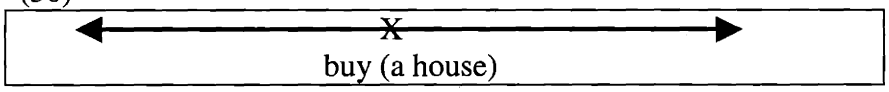
(35)



The picture in (35)a should be contrasted with (35)b - there is no sense in which there is a specific point at which knowing French begins to hold relative to not knowing French. The absence of a specific starting point for knowing French is represented with a starred X. Again, if the semantic representation of the predicate does not include a point of inception, then the predicate cannot be used in a syntactic structure which contains the aspectual feature [+start] because at LF, there is no inception point for it to correspond to.

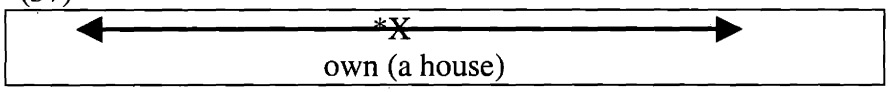
The picture in (35)a should also be contrasted with that in (36) for a non-stative predicate like *buy*.

(36)



(36) represents *buy* with an inception point. A predicate like *buy a house* can be contrasted with the semantically similar, but stative, *own a house* in terms of the availability of semantically represented inception point.

(37)



Note that *buy a house* and *own a house* differ in their ability to take an overt subject in the imperative.

(38)

a. Buy a house – it's a great investment!
b. You buy a house - it's a great investment!
c. Own a house - it's a great investment!
d. *You own a house - it's a great investment!

The difference falls out from the difference in the grammatical representation of the predicates – *own* does not refer to a starting point, while *buy* does. That is, even though the meaning of *own*

implicates the existence of a point at which the homeowner goes from not owning to owning, the point at which ownership begins to hold is not encoded in the grammatical representation of the stative, whereas a non-stative verb such as *buy* does explicitly encode the starting point of ownership.

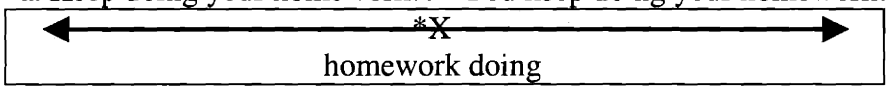
2.3.2.2 Felicity conditions on overt subject imperatives

The restriction against overt subjects in the imperatives in (27) stems from the incompatibility between the [+start] feature that licenses the overt subject and the semantic representation of the predicate.

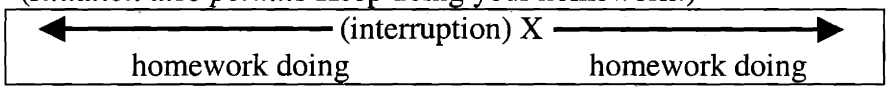
To return to the felicity conditions on (32), we can now see why (32)b is not felicitous when the homework doing event is uninterrupted, or shows no sign of imminent interruption. This is the situation represented in (39)a, where the starred X marks the absence of a starting point for the [+start] feature to pick out.

(39)

a. Keep doing your homework! / *You keep doing your homework!



b. You keep doing your homework![17]
(*situation also permits* Keep doing your homework!)



However, in (39)b, the situation in which the homework doing is interrupted or shows signs of imminent interruption, there is a starting point for the continuation available in the conceptual representation. Thus, this situation allows for an overt subject imperative since a starting point is available for [+start] to pick out.

In (40), I repeat the data from (27) that illustrated the restriction on stative predicates in overt subject imperatives for consideration with representations like that for *know French* in (35). Notice that these verbs indeed behave as stative predicates on one well-known test; they resist being put in the progressive, as (41) illustrates.[18]

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[17] *Keep doing your homework!* is also permissible in this situation; the [-start] featurethat licenses the covert subject, as the default value, is compatible with the presence of an inception point in the representation of the predicate.

[18] Smith (1991, p. 42) contends that statives are "odd in imperatives," though the speakers I have consulted accept the above examples. As for the (a) example, though it favors an activity reading (along the lines of *shut up!*), a stative reading is clearly available, e.g. *Be quiet while the guests are here!*, which is expected since the stative reading of *be* is compatible with a covert subject imperative, which involves [-start] licenser of the *pro* subject.

(40)
a. *You love your new dog!
b. Love your new dog!
c. *You owe money at the time of your death!
d. Owe money at the time of your death!
e. *You inspire others to come out of their shells!
f. Inspire others to come out of their shells!

(41)
a. *Emma is loving her doggy
b. Emma loves her doggy.
c. *Flap, a lifelong gambler, is owing money at the time of his death.
d. Flap, a lifelong gambler, owes money at the time of his death.
e. *Tommy is inspiring others to come out of their shells. (on relevant reading)
f. Tommy inspires others to come out of their shells.

It is important to comment on examples like (42) at this point.

(42)
a. Be quiet!
b. You be quiet!

Though the predicate in (42) may appear to be a stative, it can occur, as in the (b) example, with a non-contrastive overt subject, which implies the presence of a [+start] licenser; this is possible because *be quiet* actually favors a non-stative activity reading in the imperative[19], as in the inceptive reading available for (43). Here *be* means 'become'.

(43) I made him be quiet.

In examples such as (42)b, the [+start] licenser of *you* can be taken to appear on the *v* head that contains *be* qua 'become'. (42)b implores the addressee to begin being quiet; accordingly, it is consistent only with contexts in which the addressee is currently not quiet.

The position of the [+start] overt subject licensing feature is not always in the head of *be*, as examples with *be* in progressive imperatives, like (44), make clear.

(44) You be washing the clothes I arrive!

The *you* in (44) is also non-contrastive. In this case, however, licensing is not by [+start] in the *be* head, even though the subject ultimately occurs in the specifier of the phrase projected from aspectual *be*; the imperative does not seem to order the initiation of the progressive (i.e. being in

[19] Smith (1991) treats similar examples as "refer[ing] to the coming about of a state, an event which may indeed be under the control of an agent. When will is required for its maintenance a situation is taken as an Activity rather than a State: this is the difference between *Mary was impolite* and *Mary was being impolite*."

the state of washing), but that washing be already initated – the semantic result of [+start] picking out the inception point in the representation of *wash* – and still in progress at the specified time. The overt subject raises from its licensing position in the specifier of the lowest *v* (the merger position of *wash*) to the specifier of the *v* in which aspectual *be* is introduced merely to satisfy an EPP requirement; the intuition that progressive imperatives with an overt subject do not order initiation of a continuous event is thus captured.[20]

2.3.2.3 [+start] and the pragmatic uses of overt subject imperatives

It is important to note that the involvement of the [+start] aspectual feature can allow us to understand the pragmatic uses of the overt subject imperative identified in section 2.2.1 without appeal to various special contributions of *you*. Recall Davies' idea that the pragmatic uses of the overt subject imperative boil down to authority. That the relative power or status of the speaker and the addressee is important in the use of the overt subject imperative can be understood in terms of which discourse participant is able to issue an order for immediate initiation. It is typically the one with greater power or authority. Thus, a teacher may say *You sit down!* to a student, but it is considered inappropriate for a students to say the same to a teacher, whether as *You sit down – I want to show you my math homework!*, or *You sit down, it looks like you're having a rough day!*

It also stands to reason that impatience, irritation, etc. are natural uses of the overt subject imperative if they order immediate compliance. The communicative purposes for which it is appropriate to order immediate compliance through a syntactic structure that contains [+start] include the meanings in (23). For example, if a speaker has already asked an addressee to do something, and the addressee has not complied, or even shows signs of being unlikely to comply, it is be appropriate in this situation for the speaker to explicitly order the initiation of the event. If a speaker wants to make an addressee comfortable by offering a seat and a beverage, it is appropriate to attempt to ensure that the addressee make herself comfortable immediately.

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[20] Notice that assigning the [+start] feature to the *v* position of the lexical verb is also consistent with the ungrammaticality of (i), due to the same incompatibility between [+start] and *know* responsible for the ungrammaticality of (ii).

i. *You be knowing French!

ii. *You know French!

If [+start] in the progressive imperatives were located in the higher functional head that introduces *be*, or absent altogether in progressive imperatives, the ungrammaticality of (i) is unexpected.

2.4 Statives and "you"

In this section, I return to the contrastive interpretation of the overt subject in the imperative, which I have considered to be a separate phenomenon from the non-contrastive subjects discussed up to this point. This exception involves a use of the overt subject that differs from those that follow from [+start] discussed just above. When *you* functions contrastively, as we have seen, the restriction against overt subjects with a stative is suspended.

2.4.1 Contrastive subjects

The contrast between (24) and (26) illustrated that contrastive overt subject *you* may occur where non-contrastive *you* is otherwise barred. The relevant data are repeated here in (45)-(46).

(45) A: Know French – it will help you get a job in Canada!
B: YOU know French – you're the one who wants a job in Canada.

(46) A: Keep rowing – I'm going to take a little nap.[21]
B: YOU keep rowing – I'm the one who needs a nap.

In speaker B's reply to speaker A in (45), the overt subject occurs grammatically, but must be stressed and interpreted contrastively; likewise for (46). This is in contrast to the impossibility of the non-contrastive subject *you* with *know*, and the impossibility of the non-contrastive overt subject in a "keep Xing" imperative for in-progress events. This suggests in itself that contrastive subjects may not be licensed in the phrase projected from [+start], since verbs which disallow overt subject imperatives due to the lack of a starting point in their semantic representation still allow a contrastively focused subject. The evidence in the next section shows that in addition to the suspension on the semantic restriction against overt subjects, the syntactic behavior of the focused subjects differs from the regular overt imperative subjects for the purposes of VP-ellipsis.

2.4.1.1.1 Contrastive "you" survives ellipsis

Contrastive subjects behave differently from non-contrastive subjects for the purposes of VP-ellipsis, as (47)-(49) illustrate. The non-contrastive subject must be elided along with the material under *don't* in (48), while the contrastive subject in (49) must not.

[21] Imagine the situation in which speakers A and B were both rowing and neither showed a sign of stopping before speaker A's utterance.

(47)
a. A: I'm going to break that window.
b. B: Don't break that window!
c. Don't you break that window!

(48)
a. A: I'm going to break that window.
b. B: Don't!
c. *Don't you!

(49)
a. *Billy didn't tell on me, so don't either!
b. Billy didn't tell on me, so don't you either![22]

In (47), in which speaker A announces the intention to shatter a window, speaker B can reply with (47)b or (47)c. Notice the behavior of the overt subject in an imperative with VP ellipsis in (48); as (48)c shows, the subject cannot escape ellipsis, but must be deleted along with the verb phrase as in (48)b. This is not unexpected since the imperative subject occurs within the *v*P layer; all material within *v*P targeted by ellipsis must delete. In (49)c, on the other hand, the overt subject cannot be deleted in ellipsis. (48)c and (49)c differ in that the subject *you* is contrastive in the latter.

When the imperative subject is interpreted contrastively, then, it does not delete. It seems that the contrastive subject is structurally higher than the elided material. This parallels the behavior of subjects in interrogatives with VP ellipsis, shown in (50).

(50)
a. A: I don't like coffee.
b. B: Don't you ~~like chocolate~~?
c. *Don't ~~you like chocolate~~?

If speaker A says (50)a, speaker B can respond with (50)b, but (50)c is ungrammatical. I assume, for present purposes, that ellipsis targets *v*P for deletion. In the grammatical polar interrogative the subject occupies a higher position than ellipsis targets. On standard assumptions, that subject position is [spec, TP].

In (50)b, the subject is not interpreted contrastively; I do not suggest, though, that surviving ellipsis is related to contrastive interpretation per se, merely that it is indicative of a structural subject position higher than the *v*P layer. In interrogatives, the subject position,

[22] This example is taken from Potsdam (1998).

[spec,TP], is always higher than *v*P; in imperatives, the subject position is apparently only higher than *v*P when it is interpreted contrastively. In imperatives, then, it seems that there is a subject position associated with contrast that is higher than the typical subject position. This position can be taken to be a focus position (*cf.* Rizzi 1997). The contrastive interpretation is associated with a focus position; the fact that contrastive subjects don't elide shows that the focus position is above *v*P.[23]

The surface word order in (49)b, in which *don't* precedes *you*, suggests that the focus position for contrastive *you* is lower than T. I reject the possibility that the pronominal subject focus position is higher than T and (49)b involves inversion, on a par with (50)b. Potsdam (1997) argues for inversion in the imperative, but the ungrammaticality of (51) makes such a position untenable.

(51) *Do you not break the window!

In the next section, I suggest that contrastive subjects other than *you* are associated with an even higher focus position, one above T.

2.4.1.1.2 Subjects other than "you" are contrastive

The ellipsis evidence illustrates a further respect in which contrastive *you* differs from non-contrastive subjects in addition to the suspension of the restriction on co-occurrence with stative predicates; when *you* is contrastive, it occupies a higher structural position than non-contrastive *you*.

The evidence thus far suggests that [±start] licenses only *pro* and non-contrastive *you*. In fact, imperative subjects other than *you* in the literature all seem to involve contrastive interpretation. On the assumption that contrastively interpreted subjects occupy a higher structural position than [spec, *v*P], such subjects must, on a par with contrastive *you*, occupy higher focus positions. As noted in the overview to this chapter, the empirical generalizations concerning the distribution of non-*you* overt subjects are not as clear cut as those provided for contrastive *you*. In the following subsection, I explore the data from the literature pertaining to the positions in which imperative subjects other than *you* appear as a first step towards identifying the possible focus positions available in the imperative; though no satisfying

[23] Again, *you* can originate in the specifier of [-start] *v*P, as overt contrastive *you* in a stative imperative must. It will not, however, be licensed there; rather, it must raise to a focus position for licensing.

conclusions emerge, the data do not directly challenge the analysis provided for the overt/covert subject distinction in neutral imperatives or for the position of contrastive *you*.

2.4.1.1.2.1 Expanded word order options

The proposal for another focus position, above T, may provide insight into a range of imperative data that I have not yet considered in this chapter. According to the prior discussion, the non-contrastive overt subject *you* is only permitted in cases like (52).

(52)
a. You sit down!
b. Don't you sit down!

The literature contains examples of both a wider range of subjects than *you* and a wider range of subject positions than the position below T; these alternatives all seem to be associated with a contrastive interpretation. Identification of the available focus positions in the imperative should be possible by considering the wider range of subject data.

The data in (53) and (54) illustrate the availability of the focus position under T for subjects other than contrastive *you*.[24]

(53)
a. Everyone leave the room!
b. Someone get me an aspirin!

(54)
a. Don't anyone touch my stuff!
b. Don't everyone leave!

The data in (55) suggest that yet another focus position is available above T.

(55)
a. SOMEone do answer the telephone!
b. Those with luggage don't leave it unattended!
c. SOMEone do not abandon the gate!

The contrast in (56) illustrates that the two focus positions are not equally available for all contrastive subjects.

(56)
a. Those in the front back away from the barricade!
b. *Don't those in front back away from the ladder!

[24] Quantificational subjects can be thought of as contrastive given that their meaning inherently involves a contrast set. The comparable behavior of QNPs and overt subjects in *pro*-drop languages (e.g. Barbosa (1997)) may provide additional evidence for treating QNPs as contrastive subjects.

In this case, the focus position below *do* is unavailable for some reason. Likewise, (57) shows that the focus position above T is not available for all contrastive subjects.

(57)
a. *Everyone don't leave the room!
b. Don't everyone leave the room!

There is no obvious generalization that accounts for the distribution of non-pronominal contrastive subjects. However, there is one clear restriction; the focus position above T is not available for contrastive *you*. Though one encounters claims in the literature that the sentences in (58) are imperatives, they are better seen as generic prohibitions.

(58)
a. *You don't talk to me like that!
b. *You don't drive on the left!

First, (58)a-b are impressionistically non-equivalent to (59)a-b.

(59)
a. Don't you talk to me like that!
b. Don't you drive on the left!

Furthermore, equivalent examples to (58) with *be* are not grammatical; though (60)b shows that *be* is permitted in imperatives.

(60)
a. *You don't be rude to the neighbours!
b. Don't you be rude to the neighbours!

Finally, (61) shows that there is no available focus position between T and [Neg].[25]

(61)
a. *Do somebody not desert me!
b. *Do someone not abandon the gate!

To summarize, there is evidence for at least two focus positions for imperative subjects – one above T, one below T (and [Neg], when present).

2.4.1.1.2.2 Proper nouns in sequence only

The restriction against proper nouns as imperative subjects, unless they occur in sequence of imperatives, follows from the idea that [spec, *v*P] can only contain *you/pro*. For proper nouns to

[25] The contrast between these examples and (55) also militates against an inversion analysis of the *don't you* order.

appear, then, the only position they can occupy is the focus position. The sequence provides context for the contrast necessary for the focus interpretation.

(62)
a. *Bill buy the sugar.
b. A: I'll buy the sugar and tell Bill to get the coffee.
B: No, you buy the coffee and Bill buy the sugar.
c. Bill buy the sugar, Larry buy the coffee, Mary buy the milk.

2.4.1.1.3 Overt subjects in NSLs

If contrastive interpretation arises through licensing in a focus position, the prediction is that there are no contrastive low subjects in the imperative and no non-contrastive high subjects in the imperative. The clean split between overt and covert subjects in imperatives in null subject languages fits well with this generalization; in such languages, use of an overt subject corresponds to a focus or contrast interpretation in declaratives. In Greek imperatives, for example, overt subjects are only permissible with a contrastive interpretation as well (Sabine Iatridou, p.c.). We can assume that *v*P only licenses a *pro* subject; the overt subject is always restricted to a focus position. The imperative, then, should only permit overt subjects that receive a contrastive interpretation (or, if the subject is to be interpreted contrastively, it must be overt).

(63) Greek
a. an su aresi to kalo tiri, (*esi) ela sto parti mu
if to-you please the good cheese, you come-IMP to-the party my
*If you like good cheese, you come to my party!
b. eɣo θα mino spiti me ton Oresti ke *(esi) piɣene sta maɣazia
I FUT stay home with the Orestes and you go-IMP to-the stores
I'll stay home with Orestes and you go to the grocery store!

The contrast in (63) goes in the expected direction. In (63)a, in which the subject of the imperative is not contrastive, it cannot be overt, while in (63)b, in which the imperative subject is contrastive, it must be overt.

2.4.2 Section Summary

To conclude this section, it was the data in Section 2.2.2.1 that led to a novel approach to the interpretive difference between overt and covert subject imperatives, but one that is still consistent with the pragmatic uses of the overt subject imperative. The proposed syntax/semantics of the [+start] aspectual feature both predicts the restriction on overt unstressed

you with predicates that lack a semantically represented point of inception and reasonably underlies the pragmatic uses of the overt subject imperative.[26] Contrastive imperative subjects are not subject to the restriction against occurring with stative predicates, but, at least superficially, these subjects appear to occupy (one of two) syntactic positions not tied to the [±start] feature.

2.5 Structure of the imperative

Given the above considerations, a syntax for the English imperative can be provided in which the only variation in word order arises from the number of available subject positions. This contrasts with Potsdam's analysis, which posits optional T-to-C, and with Rupp's analysis, which posits optional subject raising to [spec, TP]. In neither account are the various word orders that are derived through optional movement tied to subject interpretation, nor is there any obvious way of relating the conditions on the proposed optional movement to the interpretive properties of the subjects discussed here. In the present account, the set of subject positions does not constitute a set of equally available options; rather, the interpretation of the subjects is fixed by position. Likewise, different relative orders of the subject and *do* arise not from optional raising of T, but from the different focus positions the subject may occupy.

In this final section, I lay out the structure of the imperative. The overarching goal is to take the default assumptions about the syntax of all clausal elements as far as possible; by taking seriously the availability of the range of focus-based subject positions argued for above, it is possible to give a unified syntax of the imperative in which no optional subject raising or optional T-to-C movement is necessary.

2.5.1 Clause structure issues

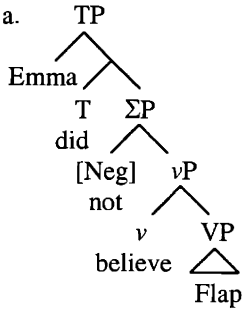
The occurrence of *do*-support in imperatives differs from *do*-support elsewhere in the grammar of English only in that it is obligatory with *have* and *be* in the context of negation. The default assumption regarding *do*-support in imperatives is that it occurs for the same underlying reason as it does elsewhere in the grammar. *Do*-support occurs when tense is not realized on a

[26] I have built aspectual information into the clausal syntax specifically in order to capture the contrast between those verbs that permit overt subject imperatives and those that do not at the heart of this chapter. Whether or not all aspectual information should be represented featurally in the syntax is a question with much wider scope than the imperative data alone can bear on. In this particular case, though, the inclusion of a [start] aspectual feature in the syntax, on *v*, provides us with a way to understand data that otherwise receive no coherent explanation.

raised auxiliary/copular in T, and tense realization on the main verb is prevented due to the presence of the sentential negation/emphatic affirmation head Σ (cf. Laka 1990).

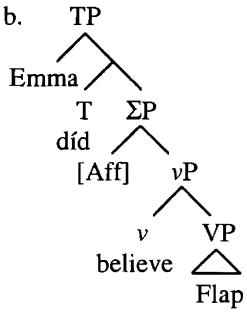
(64)

a.



Emma did not believe Flap.

b.

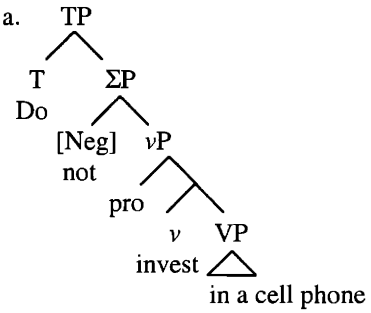


Emma díd believe Flap.

Do-support can be taken to occur in the same structural configuration in imperatives. The difference between imperatives and declaratives with respect to *do*-support can be attributed to the low position of the auxiliaries.

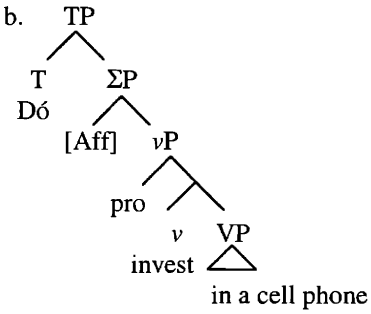
(65)

a.



Do not invest in a cell phone!

b.

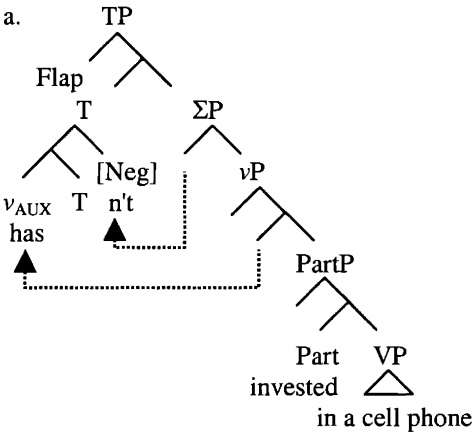


Dó invest in a cell phone!

Whereas *do*-support does not occur in declaratives because a raised auxiliary/copula occupies T, it is required in imperatives. Imperative T does not attract the auxiliary; it seems to lack the relevant feature(s) that establish an Agree relationship with the auxiliary in declaratives, making way for movement of the auxiliary to T, as in (65)a-b.

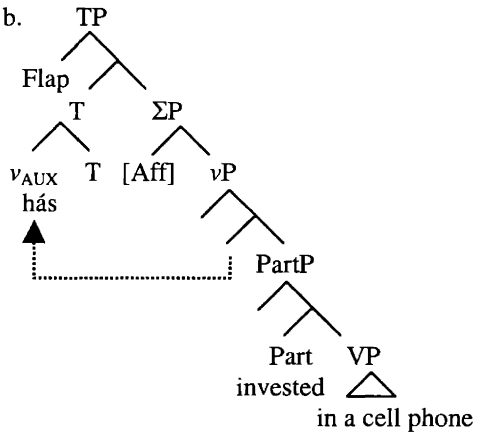
(66)

a.



Flap has not invested in a cell phone.

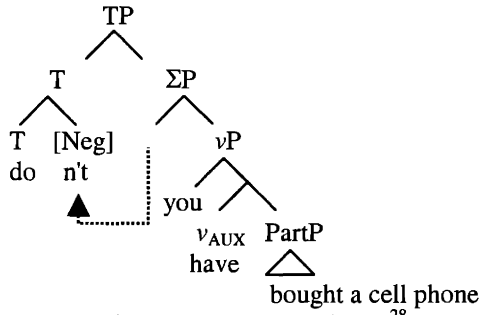
b.



Flap hás invested in a cell phone.

The auxiliary remains in its base position in the imperative.[27]

(67)



Don't you have bought a cell phone![28]

Note that *do*-support is also incompatible with modals in declaratives. Modals, which either obligatorily raise to T or originate there, cannot occur in imperatives at all; this is another way, in addition to lack of auxiliary raising, in which the featural content of imperative T seems impoverished.

(68)

a. You should buy a cell phone.
b. *Should buy a cell phone!

Also in contrast to the declaratives in (69), tense distinctions are absent in the imperative, as in (70).

[27] The subject originates and is licensed in the *v*P in which the lexical verb is introduced, below PartP, then raises to [spec, v_{AUX}P].

[28] The subject *you* is actually licensed in the specifier of the lowest *v*P, where the [+start] feature occurs. It presumably raises to the specifier of the v_{AUX}P for EPP reasons or φ-feature agreement (*cf.* Carstens 2001).

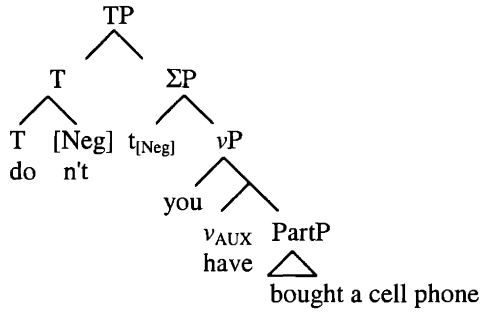
(69)
a. Flap grades his students' papers at the dinner table.
b. Flap graded his students' papers at the dinner table.

(70)
a. Grade the papers!
b. *Graded the papers!

This is yet another way in which imperatives differ from declaratives that may be attributed to the feature content of T.

Imperatives differ from interrogatives in terms of word order. Although the imperative subject occurs below *don't*, the range of word orders predicted by SAI in polar interrogatives are not available. If we take the position of *don't* to indicate T, and not C, in (71), the differences are expected.

(71)



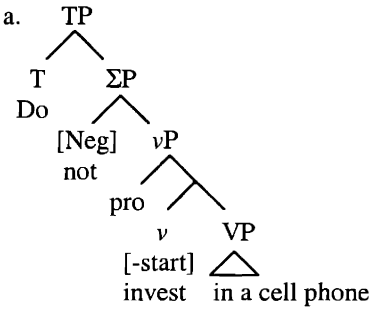
Don't you have bought a cell phone!

On the assumption that *don't* is in T, the occurrence of the subject between *don't* and *have* suggests that it is between [Neg] and the *v*P projected from auxiliaries.

Imperatives with *do* and *do not* can be similarly analysed, as in (72).

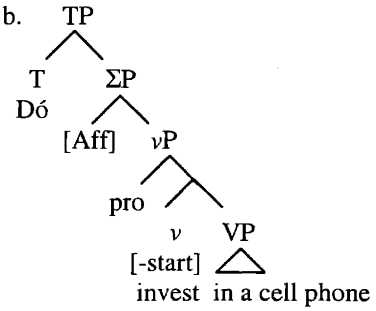
(72)

a.



Do not invest in a cell phone!

b.



Dó invest in a cell phone!

The lack of SAI predicts the ungrammaticality of the imperatives in (73)b.

(73)
a. Do you not answer the telephone?
b. *Do you not answer the telephone!
c. Do you answer the telephone?
d. *Do you answer the telephone

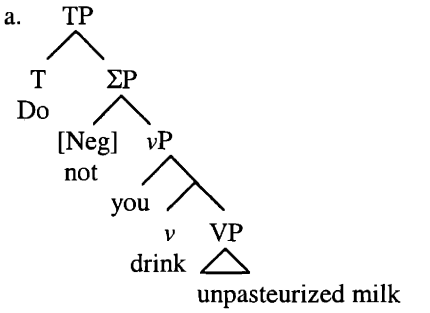
There is no subject position between T and [Neg]/[Aff] in (72) for the overt subjects in (73)b,d to occupy. Neither is there a subject position in [spec, TP] in the imperative, as the data in (74) show.

(74)
a. *You do not/don't answer the telephone!
b. *You do answer the telephone!

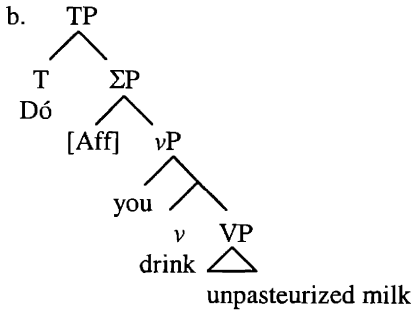
The lack of subject raising to [spec, TP] in imperatives is, in the context of T's other impoverished behavior, not remarkable. T also seems to lack all of the feature content associated with it in other clause types that is responsible for tense contrasts, the occurrence of modals, and attraction of auxiliaries; the absence of the feature responsible for attracting the subject seems to be part of the general featural impoverishment of imperative T. Maintaining a low pronominal subject position in imperatives also allows for the maintenance of the assumption that [spec, TP] does not license null subjects in English root clauses. When the subject is null, *pro* can be taken to occupy the low position in (72).

Finally, the ungrammaticality of (75)a and b as imperatives suggests that imperatives do not share a structure with polar interrogatives.

(75)



*Do not you drink unpasteurized milk!



*Do you drink unpasteurized milk!

Although the (75)a word order also constitutes an ungrammatical interrogative, the (75)b word order is possible in interrogatives; the corresponding interrogatives, that is, contrast in grammaticality, while the imperatives are both bad. What (75)a-b share in common on the approach developed here is a configuration in which an overt subject occurs with an in situ Σ

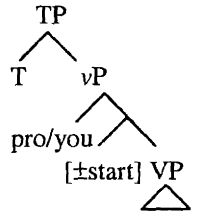
head. In chapter 3 I will argue that this configuration is responsible for the ungrammaticality; the overt subject intervenes for a morphological adjacency relationship that the Σ head must establish with *v*.

The approach to the clause structure in this section shows that accepting the low subject hypothesis allows for a simple treatment of the imperative clause structure, particularly in terms of the relative order of the pronominal subject and support-*do*.

Turning to the two additional subject positions associated with focus, these contrast with the neutral, non-contrastive subject imperative clause structure in (76).

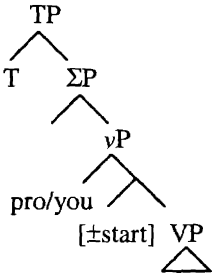
(76) non-contrastive *you/pro*

a.



a. You/pro sit down!

b.

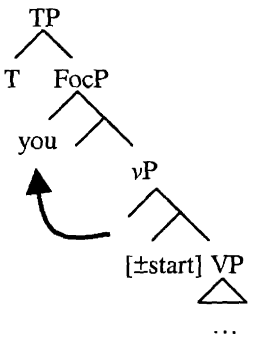


b. Don't you/pro sit down!
b'. Do (not) sit down!
c. *Do (not) you sit down!

The structure of an imperative with a contrastive pronominal subject is as in (77); this FocP occurs between TP and ΣP, if present.

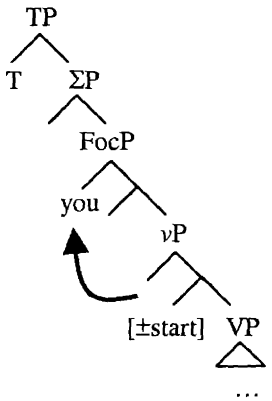
(77)

a.



a. Yóu know French!
b. (A: Take out the garbage! B: Yóu!)

b.

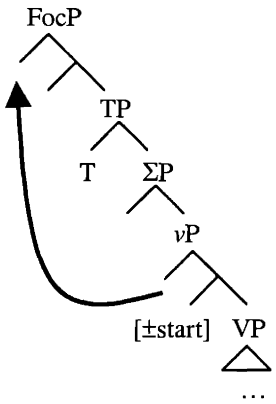


b. (Billy didn't tell on me, so) don't yóu!

With a stative predicate, only the negative value of the [start] feature can yield a coherent LF; the overt subject is licensed in FocP in such cases.

A contrastive non-pronominal subject, as in (78), is licensed in the highest FocP.

(78)



b. Those with luggage don't/do not leave it unattended!
b'. SOMEone do answer the telephone!
c. *You do (not)/don't drive on the left side!

2.5.2 Do-support without support

If T is as impoverished as it seems to be in the imperative, a question arises as to what it is in T that requires *do*-support in negative and emphatic imperatives. In the next chapter, I propose an account of *do*-support that depends not on hosting some interpretable morpheme in T, but on the structural relationship between T and *v* at PF. I put off an explanation of the nature of *do*-support in the imperative until chapter 3. For present purposes, it is important only to note that *do* occupies T in all negative and emphatic imperatives, even those with the auxiliaries *have* and *be*, since auxiliaries do not raise to T in the imperative. A structural account of *do*-support, rather than a treatment in terms of a morphophonological rescue operation (cf. Bobaljik 1995) is in order, since there is no evidence in the imperative that T contains any contentful material to be hosted.

2.5.3 Imperative TP in phase-based theory

The assumption that imperatives are root TP structures requires comment. If the syntactic phases (i.e. points of transfer to the systems responsible for phonological spellout and interpretation, respectively) are only CP and *v*P (cf. Chomsky 2000, 2001), then how does a TP structure actually receive a pronunciation and interpretation? This implies either that TP may be a strong phase, or that imperatives actually do have content in the CP domain (cf. Han's [IMP] operator), either of which position would require argument beyond the scope of this chapter.

2.6 Conclusions

To conclude, this chapter argues that English imperative syntax is best understood from the perspective of a basic subject position in [spec, *v*P] projected from the aspectual feature [±start]; the low subject position sheds light on imperative word order, and overt subject licensing by [+start] explains why stative predicates are incompatible with the overt subject in the imperative. The explanation of the incompatibility is couched in terms of ineffability at LF, where an interface crash occurs when the [+start] feature has no corresponding inception point in the semantic representation of the predicate to pick out; the meaning of stative predicates as represented in the conceptual-intentional system is mismatched with a syntactic context that contains the feature [+start]. This approach is meant to capture the contrast in (79) based on a proposed representation of statives like *know* as lacking an inception point.

(79)
a. Know French!
b. *You know French!

Note that it can also capture a restriction on the interpretation of examples like (80)b in the same manner.

(80)
a. Speak French!
   i. 'talk in French'
   ii. 'know French'
b. You speak French!
   i. 'talk in French'
   ii. *know French'

The predicate 'speak French' is ambiguous between an active sense (i) and a stative sense (ii); the latter is unavailable in an overt subject imperative, as expected on the view advocated in this chapter that the conceptual representation of stativity lacks an inception point.

Additionally, this chapter argues for multiple focus positions in which imperative subjects may be licensed. The availability of these positions sheds light on the circumstances in which the restriction against overt subject imperatives with stative predicates appears to be violated, and on the correlation between available subject positions and obligatory contrastive interpretation of the subject argument.

The analysis provided here shows that it is possible to assimilate the structure of the English imperative to the clause structure of English more generally.

Chapter 3: An overt subject restriction at PF

Overview

The previous chapter dealt with a restriction against overt subjects that results from LF-ineffability when stative predicates occur in the context of a [+start] aspectual feature in the imperative. This chapter deals with a different restriction against overt subjects in the imperative, the **do (not) subject* puzzle laid out in Chapter 1. The overt subject is barred in imperatives below *do* and *do not*, as in (2)-(3), in contrast to the grammaticality of *you* below *don't* in (1).

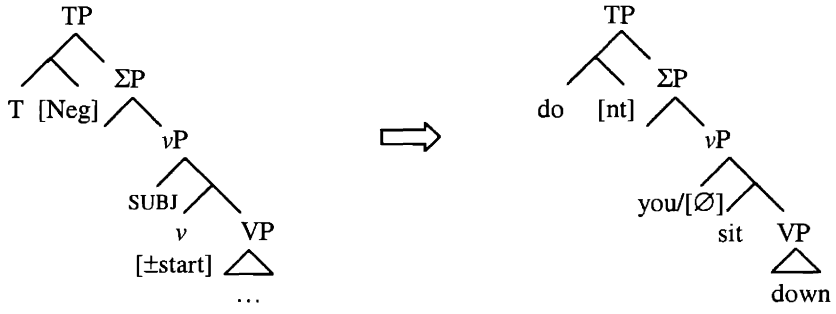
(1)
a. Don't sit down!
b. Don't you sit down!

(2)
a. Do not sit down!
b. *Do not you sit down!

(3)
a. Do sit down!
b. *Do you sit down!

The structure proposed for negative imperatives, based on the analysis in Chapter 2, is as in (4). In what follows, the Σ head is represented in the position in which it is realized at PF; as I will argue below, [Neg] is spelled out either in situ within ΣP or in a raised position within T.[29] When negation is realized within T, where it is spelled out as [nt], as in (4), the subject may be overt or covert.

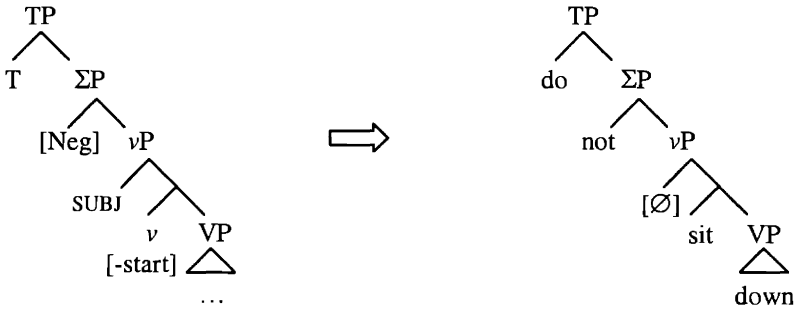
(4) Don't you sit down!/Don't sit down!



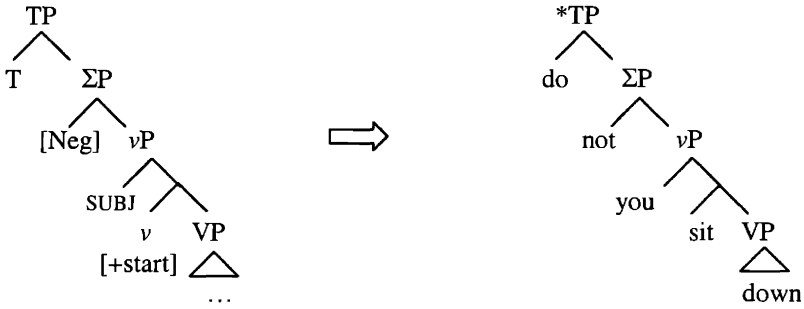
[29] The *v* in T represents the feature bundle spelled out as support-*do* at Vocabulary Insertion on the analysis of *do*-support I argue for later in this chapter.

However, when negation is realized within ΣP, where it is spelled out as [nɑt], only a null subject is possible; this contrast is illustrated in (5) and (6).

(5) Do not sit down!



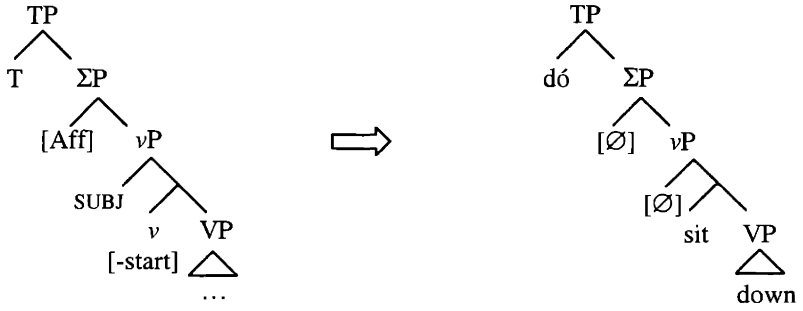
(6) *Do not you sit down!



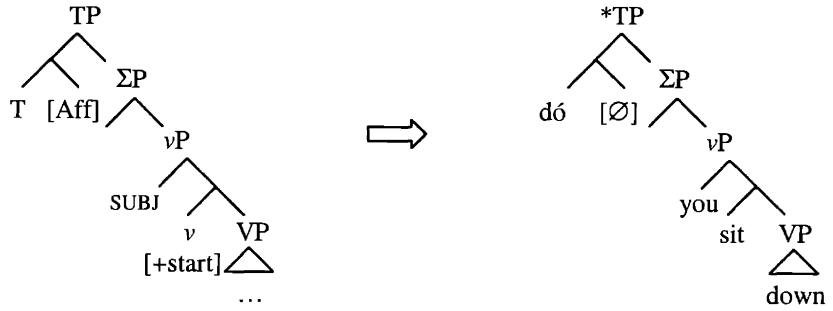
When [Neg] remains in situ and the subject is overt, the result is ungrammatical. The purpose of the present chapter is to understand precisely how failure to raise [Neg] to T interacts with the presence of an overt subject to yield ungrammaticality.

The facts in (3) suggest the null Σ head [Aff] is also incompatible with an overt subject; its parallel behavior to [nɑt] suggests that [Aff] does not raise to T. If [Aff] could raise to T, as in (8), we would expect it, like [n̩t], to be compatible with an overt subject. However, only the derivation in (7) yields a grammatical output; (8) yields an ungrammatical output.

(7) Dó sit down!



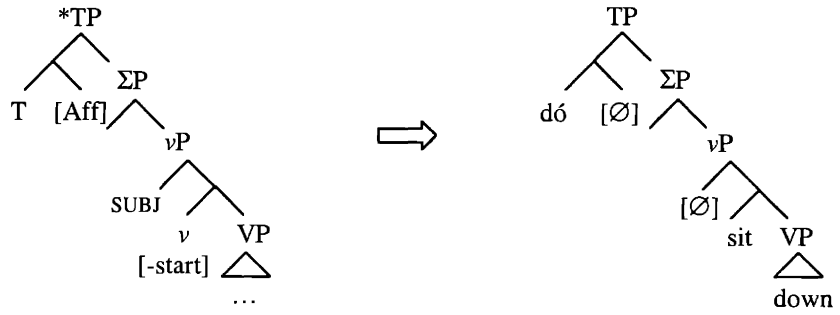
(8) *Dó you sit down!



A representation with raised [Aff], on a par with raised [Neg], seems to be ruled out.

There is no compelling reason to entertain (9) as a possible representation. It yields the same word order that results with in situ [Aff] and a null subject, but introduces a serious complication by allowing the otherwise barred raising of [Aff] in this one case.

(9) Dó sit down!



It seems undesirable to posit a distinct null vocabulary item for raised [Aff], as in (9), given that the data in (3) suggest there is no null [Aff] counterpart to raised [Neg]. If we assume that [Aff] is a counterpart to in situ [Neg], the possible word order patterns fall out.

The main goal of the chapter is to show that the incompatibility of the in situ Σ head with an overt subject in the imperative is due to a specific structural adjacency requirement of the Σ morpheme that cannot be met in the configurations marked ungrammatical above, but is met when Σ raises to T. It will be shown that the effect of the overt subject on satisfaction of an in situ Σ head's adjacency requirement is one instance of argument intervention for the relationship between Σ and *v*; the intervention effect also holds in the domain of pseudogapping. It will be demonstrated that the ungrammaticality results from disruption of adjacency in the PF component; therefore it is treated as a PF interface crash.

3.1 On [nt] and [nɑt]

This chapter develops a unified approach to sentential negation in which the surface forms [nɑt] and [n̩t] represent realizations of a single syntactic terminal node, [Neg], which always originates in the same syntactic hierarchical position between T and *v*, but whose phonological exponent depends on where it ends up in the course of the derivation. I propose that [nɑt] is the spellout of the [Neg] head when it remains in situ as the head of ΣP (Laka 1990), while [n̩t] is the spellout of the [Neg] head when it has raised out of ΣP to T. Ultimately, I argue that [Neg] raising, and indeed head movement in general, takes place in the PF component. The two forms of sentential negation are treated as contextual allomorphs.[30]

I propose that [Neg] is further subject to a dependency requirement for adjacency with the head of its complement in the morphology. When [Neg] raises to T, adjacency is met under locality with a *v* (an auxiliary, modal, or *do*) also within the T. In situ [Neg] must establish adjacency with a local verbal element as well, the head of its *v*P complement. In cases in which this adjacency is disrupted, however, the result is ungrammatical. In the imperative, disruption of adjacency will be seen to be caused by the presence of an overt subject in [spec, *v*P], but, crucially, not an adverb adjoined to *v*P; adjacency disruption stems from argument intervention. I argue that the ungrammaticality reflects ineffability at the PF interface; [Neg]'s failure to establish adjacency with *v* halts the operations of the PF component, preventing Vocabulary Insertion, at least into [Neg]. The ungrammaticality is due not to a violation of any syntactic principle, but to a failure of the [Neg] morpheme to meet a morphological structural requirement. In this light, [Neg]'s adjacency requirement strongly resembles that required for tense affix lowering as proposed in Bobaljik (1995). The tense affix is treated there as a dependent element that must be merged with a verbal element.[31] It may be realized in situ in T as long as there is appropriate material in the complex T for it to be realized on (an auxiliary, modal, or *do*); otherwise it must lower onto the verb. Bobaljik argues that tense lowering is morphological merger of the tense affix with the verb under adjacency, where adjacency is assessed, crucially, over hierarchical structure and not linear phonological strings. This is argued to be the case

[30] In what follows, the treatment of [Aff] should be assumed to be identical to that of in situ [Neg]

[31] Halle and Marantz (1993) point out that the dependency is not due strictly to the phonological content of T requiring support, as a [∅] realization of tense must be in the same configuration with the verb as a phonologically contentful realization of tense

given that adjacency is disrupted by intervening arguments but not by linearly intervening adjuncts. Tense and [Neg] thus seem to share the same adjacency requirement, though they differ in one substantial way. While the tense affix lowers onto the verb in the morphology, provided that adjacency obtains, [Neg] does not similarly undergo merger with the element it establishes adjacency with. Tense and in situ [Neg] are, however, both affected by the intervention of an argument for their relationship with *v*. Locating the difference between Tense and [Neg] in terms of whether or not lowering to *v* takes place subsequent to assessing adjacency with *v* forces us to augment the theory of movement in the PF component as laid out by Embick and Noyer (2001). I propose that their notion of Lowering, a PF movement that operates on adjacent terminal nodes of the structure that the Syntax provides as input to Morphology, must be teased apart into two separate operations: Adjacency Assessment and Lowering. Adjacency Assessment in a necessary precursor to Lowering, but Lowering need not always follow Adjacency Assessment. On this view, the PF component contains relations between elements that mirror those proposed to be active in the Syntax – Agree and Move.

This present analysis not only sheds light on the nature of operations in the PF component of the derivation, but will be seen to simplify the overall treatment of English sentential negation. The approach takes as a starting point the desideratum of a unified syntax for sentential negation in which there is a unique clausal projection from which both [nɑt] and [n̩t] originate, and exploits operations on the PF branch to account for conditions on the spellout of the [Neg] head. That is, conditions on Vocabulary Insertion determine the form that negation shows up in, and conditions on Adjacency Assessment account for cases in which no available syntactic explanation exists for the ungrammaticality of a particular negative clause. The approach is situated within the theory of Distributed Morphology (Halle and Marantz 1993, and subsequent work), and as such, subscribes to a particular model of the grammar in which the output of the syntactic computation module serves as input to the PF module, which includes, on the approach developed here, a morphological component responsible for operations such as Adjacency Assessment, Lowering and Vocabulary Insertion. The explanations for particular patterns of grammaticality emerge as consequences of conditions in this submodule of the PF component. This contrasts with other approaches, of which Bresnan (2001) is a recent example, in which the patterns of grammaticality of negative clauses are determined through a type of morphosyntactic Optimality Theory. A global evaluation metric compares entire clauses in

which sentential negation is realized on various constituents as output candidates. Particular ungrammatical clauses are ruled out because in an alternative output candidate clause, with the same input, negation is realized in a position that violates fewer constraints on Neg-realization.

For example, Bresnan claims that an interrogative like (10)a is ungrammatical because (10)b, a better alternative, is available.

(10)
a. *Is he not innocent?
b. Isn't he innocent?[32]

(10)b is preferred because the constraint ranking crucially prefers realization of sentential negation together with tense. However, in cases where the equivalent of (10)b is unavailable, the equivalent of (10)a is grammatical.

(11)
a. Am I not innocent?
b. *Amn't I innocent?

Bresnan argues that in dialects in which *Aren't I innocent?* does not occur, the absence of the form *amn't* results in the grammaticality of a syntactic realization that is usually ruled out. That is, the grammaticality of particular negative clauses is relativized to a set of morphosyntactic output constraints, as well as to certain lexical gaps such as **amn't*.

Other examples, such as the ungrammaticality of (12), are also ruled out by the effects of constraints on the realization of negation in particular structural positions.

(12) *Am not I innocent?

(12) is ruled out for Bresnan by a constraint that bans the non-reduced form of negation in C.

In contrast to Bresnan's approach, the approach I advocate here deals with the same sorts of facts in terms of more local evaluations. For instance, (12) is ruled out because [nɑt] is the incorrect vocabulary item for insertion into raised [Neg]: [n̩t] blocks [nɑt] in this environment. I treat both examples in (10) as grammatical interrogatives that simply differ in terms of whether or not [Neg] has raised prior to Vocabulary Insertion. As far as I can tell, it is also not true that (10)a is worse than (11)a in any dialect, yet it should be if (11)a is licensed only by virtue of the

[32] It is not clear to me that (10)a is actually ungrammatical. My own idiolect, and that of many other English speakers I have asked, permits both (10)a and (10)b on both a sentential negation and constituent negation reading. There may be a register difference that distinguishes between them such that (10)a sounds more formal.

ungrammaticality of (11)b.[33] Likewise, the examples in (11) are both taken to have licit syntactic structures, but (11)b is ruled out because the vocabulary item [æm] is restricted from occurring in a complex with negation. In short, I wish to point out that the analysis proposed here shows that, contrary to Bresnan's contention, data from English sentential negation do not force an analysis in terms of global morphosyntactic competition[34]. These data can be treated in terms of conditions contained discreetly within the PF module, e.g. conditions evaluated in a strictly local syntactic domain. Given these two alternative approaches, explanation in terms of local determination rather than global cross-module computations seems preferable.

The present analysis also contrasts with approaches such as that of Zwicky and Pullum (1983). Based on a list of characteristics said to distinguish between clitics and affixes, Z&P argue that [n̩t] is an inflectional suffix, contrasting their position with one in which [n̩t] is a clitic derived via phonological reduction from [nɑt]. Thus, although [n̩t] and [nɑt] both express sentential negation, they are held to have heterogeneous origins; the former as an inflectional affix, the latter as a syntactic head. As I will show, an approach in which the two forms of sentential negation have a homogenous origin is made possible within a theory like Distributed Morphology.[35] They are simply contextual allomorphs of a single syntactic terminal.

The chapter proceeds as follows: first the proposal that [n̩t] and [nɑt] are contextual allomorphs of the phonological exponent of [Neg] is laid out. Next, the evidence for in situ [Neg]'s adjacency requirement is considered and supported with evidence from English imperative and pseudogapping constructions. The technical details of the analysis are then explicated. First, I show precisely how adjacency is assessed with respect to the feature that [Neg] targets; second, I show that the syntactic analysis that I rely on does more than simply yield the hierarchical structure necessary to allow the morphological analysis to proceed as it does, but actually provides insight into the long-standing problem of apparent Head Movement

[33] See Trommer (2001) for Marantz's criticism of the problematic predictions about possible dialects of English derived in Bresnan's system.

[34] See also Trommer (2001) and Frampton (2001) for approaches that do not rely on global competition.

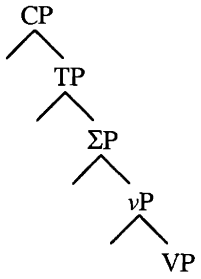
[35] As Embick and Noyer (2001) point out, the clitic/affix distinction that plays a role within Lexicalist approaches such as Zwicky and Pullum (1983) is an artifact within DM; apparent differences between dependent elements that led to the traditional clitics/affix distinction fall out from the manner in which an element comes to be associated with its host in the PF component. On the other hand, the analysis is broadly consistent with Zwicky and Pullum's conclusion that [n̩t] is not a cliticized reduced form of [nɑt], but the realization of an affix in a position similar to that of an inflectional affix like tense.

Constraint violations (Travis 1984) created by auxiliary raising over negation. The analysis will be shown to be consistent with a PF locus for head movement and a new structurally based treatment of *do*-support based on this finding is proposed. Finally, in the conclusion, I will indicate some directions for further research on English negation given the results of the analysis.

3.2 Complementary Distribution of [n̩t] and [nɑt]

I rely on the following assumptions about the structures in which *not* and *n't* are found.[36] I assume that the sentential negation head [Neg], spelled out either as [nɑt] or [n̩t], is the head of ΣP (Laka 1990), which, when present, is projected as the sister of T. The basic clause structure is given in (13).

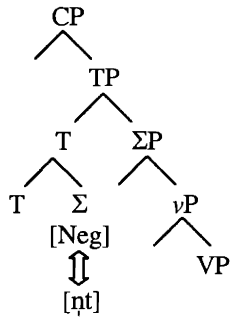
(13)



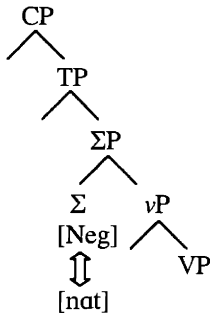
I will further assume that [Neg] is free either to raise to T or to remain in its base-generated position. The claim is that in the former case, it is spelled out as [n̩t] (14)a, while in the latter it is spelled out as [nɑt] (14)b.[37]

(14)

(a)



(b)



[36] I consider the case of sentential negation here, and set aside the case of constituent negation entirely.

[37] I assume here late insertion of vocabulary items, according to the model of Distributed Morphology (*cf.* Halle and Marantz 1993).

For present purposes, it is crucial only that the [Neg] morpheme appears in one of these two positions by the stage at which Vocabulary Insertion takes place. Section 3.4.3 considers whether the movement is better seen to take place in the syntax or in the morphophonology (i.e. PF head-movement). There, evidence is provided that head movement of the auxiliaries to T actually instantiates raising at PF; if, by extension, all head movement is to be treated as PF movement, then [Neg] raising too would occur after the narrow syntax.

The structure in (14a) corresponds to a sentence like (15)a, (14)b to a sentence like (15)b.

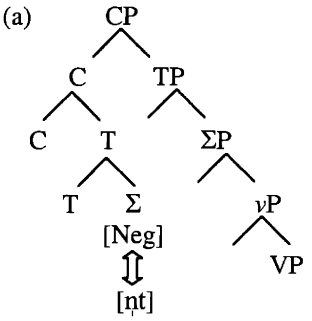
(15)

a. Emma doesn't rob banks.
b. Emma does not rob banks.

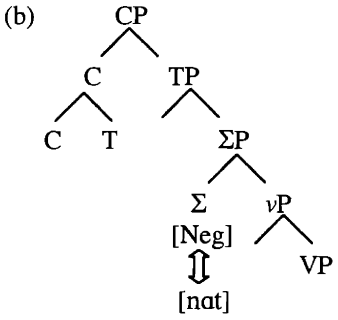
The structures in (14) make a specific prediction about the form of negation in the corresponding polar interrogatives. T-to-C raising in a structure like (14)a brings [Neg] along, since [Neg] is adjoined to T, but it leaves [Neg] behind in (14)b. The trees in (16) illustrate this.

(16)

(a)



(b)



Thus, in interrogatives in which negation is realized above the subject position ([spec, TP]), the prediction is that only [nt] (the spellout of [Neg] in T) may occur. Likewise, in interrogatives in which negation is realized below the subject, the prediction is that only [nɑt] (the spellout of in situ [Neg]) may occur. The data in (17) demonstrate that these predictions are borne out.

(17)

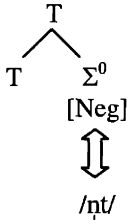
a. Didn't Emma rob the bank?
b. *Did not Emma rob the bank?[38]
c. Did Emma not rob the bank?
d. *Did Emman't rob the bank?

[38] Zwicky and Pullum (1983) point out that some sentences superficially similar to (7b) are acceptable to some speakers, such as "Will not the electorate of this country consider that they have a right to know these facts?" They suggest that the relative positions of *not* and the subject come about due to heavy NP shift in this case.

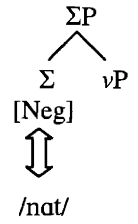
The interrogative in (17)b is ruled out because negation within T cannot be spelled out as [nɑt], but only as [n̩t], while (17)d is ruled out for the opposite reason, because negation in its base generated position cannot be spelled out as [n̩t], but only as [nɑt].

The insertion contexts for the spellout of [Neg] are given in (18); (18b) will be claimed to be the elsewhere case, needing no specified context.

(18) a. insertion context of [n̩t]



b. insertion context of [nɑt]



(elsewhere)

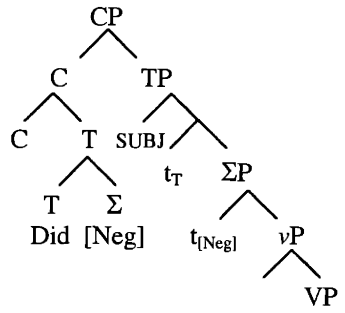
It must be noted that any analysis of the facts in (17) requires the availability of Neg-raising to T prior to T-to-C movement as long as [Neg] is taken to head an independent syntactic projection.[39] One question that must be addressed regarding this movement is whether it is truly optional, as the characterization in (14) suggests, or whether it is obligatory. Frampton (2001) advocates the latter approach, claiming that [Neg] always raises to T; when the head of the [Neg] chain ([Neg] in T) is pronounced, it is [n̩t], and when the tail of the [Neg] chain (in situ [Neg]) is pronounced, it is [nɑt]. In this sense, the spellout of [Neg] is no different than in (18). Frampton explains the data in (17) by proposing the following restriction on the conditions in which the tail of the [Neg] chain may be spelled out:

> I assume that Neg can optionally be realized in the position of the trace, under the condition of linear adjacency. This yields an alternation between *is not* and *isn't* in non-interrogative contexts but predicts that only *isn't* is possible in Comp, because linear adjacency does not hold if [Tense] has raised to Comp over the subject.

In negated polar interrogatives, as Frampton points out, the head and tail of the [Neg] chain are not adjacent; the subject occurs between [Neg] in T and its base position.

[39] Potsdam (1998) argues from licensing of VP ellipsis under *not* that [Neg] must be a head.

(19)



Like Bresnan, Frampton considers (17)d, repeated here as (20)a, to be ungrammatical.

(20)

a. *Did Emma not rob the bank?
b. *Did not Emma rob the bank?
c. *Did Emman't rob the bank?

This is the only case for which his trivial chain condition is required – the option of spelling out the tail of the [Neg]-chain is blocked. The ungrammatical cases repeated in (20)b and (20d fall out of the spellout conditions on [Neg].

I will argue against Frampton's account for reasons other than the fact that it derives incorrect predictions for the dialect I consider here, in which (20)a is actually grammatical. In the next section, cases in which the head and tail of the [Neg] chain are adjacent but it is impossible to spell [Neg] out as [nɑt] will be brought to light. Furthermore, it will be shown in Chapter 4, the assumption that [Neg] always raises to T creates significant complications for the treatment of the interactions between [n̩t] and certain modals and reduced auxiliaries.

3.3 The adjacency restriction on [nɑt]

We have seen that when [Neg] does not raise to T, it is spelled out as [nɑt] in the declaratives and interrogatives above. There are two cases in which in situ [Neg] cannot, however, be spelled out as [nɑt] – in the overt subject imperative, and in pseudogapping. I will argue that these cases reveal that in situ [Neg] is subject to a requirement in the Morphology that it must be adjacent to a verbal element. In this sense, [Neg] is a dependent element; it shows a dependency requirement for adjacency in the morphology. If adjacency between in situ [Neg] and the verb fails to obtain due to the presence of an intervening argument, [Neg]'s

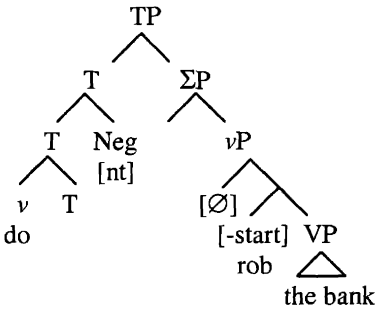
morphological requirement cannot be met. When adjunct material intervenes, on the other hand, [Neg] can be spelled out as [nɑt], suggesting that adjacency does obtain in such cases.

Let us turn to the English imperatives in (21) to illustrate [Neg]'s requirement.

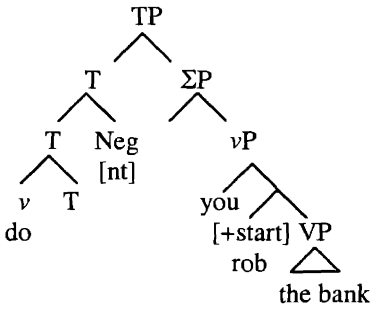
(21)
a. Don't rob the bank!
b. Don't you rob the bank!
c. Do not rob the bank!
d. *Do not you rob the bank!

I will assume the following structure for imperatives, based on the arguments in Chapter 2.

(22)
a. Don't rob the bank!

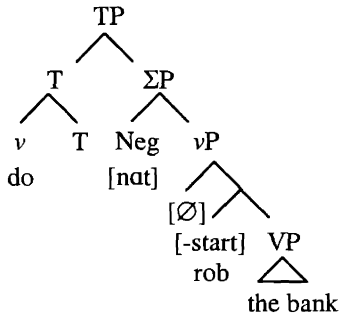


b. Don't you rob the bank!

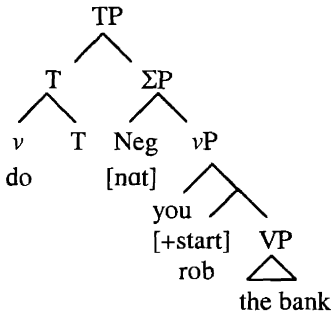


When [Neg] raises, whether there is a covert subject, as in (22)a, or an overt subject, as in (22)b, has no effect on the spellout of [Neg]. The insertion context is as in (18)a above. Consider now the imperative structures in (23), which differ from (22) only in the lack of [Neg] raising.

(23)
a. Do not rob the bank!



b. *Do not you rob the bank!



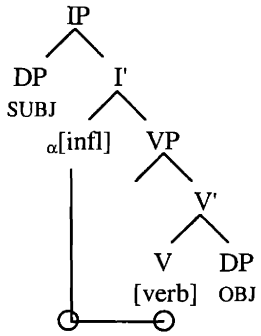
In (23)a, when the covert subject occurs between [Neg] and the verb, no overt material blocks adjacency between [Neg] and *rob*. However, in (23)b, when the overt subject *you* occurs between [Neg] and the verb, adjacency is disrupted, resulting in ungrammaticality. The intervening subject prevents in situ [Neg] from satisfying its morphological requirement for adjacency.

The idea that subjects count as interveners for a relationship between a dependent element and its target host is employed by Bobaljik (1996) in his account of tense lowering and *do*-support in English. Bobaljik argues that tense occupies an independent head in the syntax, but as an affix, it must be realized on an independent word when there is no modal or auxiliary verb in T (*cf.* Lasnik's (1981) Stray Affix filter). This is achieved through morphological merger under adjacency with the main verb; where adjacency fails to obtain, merger is blocked, and the tense affix must be realized on an inserted dummy verb *do*. Crucially, merger is blocked not only in the well-known negative or emphatic environments, but, as Bobaljik shows, when the subject intervenes between T and the verb. Most interestingly, adverbs, even when they intervene between T and the verb, do not block merger. In essence, as he points out, Bobaljik reintroduces Chomsky's (1955) syntactic affix hopping rule as a morphological head merger process, and gets the adjacency conditions Chomsky wrote into the structural description of the rule by specifying a locality condition on merger.

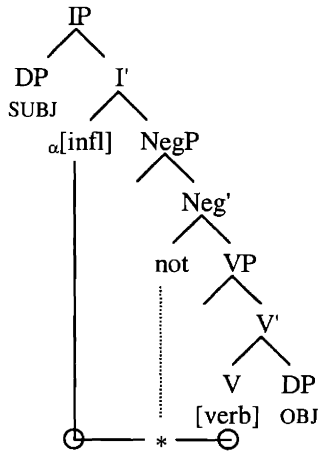
Bobaljik appeals to morphological merger to account for the presence of tense marking on the verb in simple declaratives like (24)a. The inflectional affix in I and the verb are adjacent in the morphology, and, as such, may undergo merger. The merger has the effect that the tense inflection, though it originates syntactically in I, is realized on the verb – it is, in effect, a lowering operation. The lowering operation is blocked when the affix in I and the verb are not adjacent, as in (24)b. In this case, adjacency is interrupted by *not*, so merger is blocked. In order for the tense affix to be realized, dummy *do* is inserted in I, according to Bobaljik.

(24)

a. Sam likes green eggs and ham

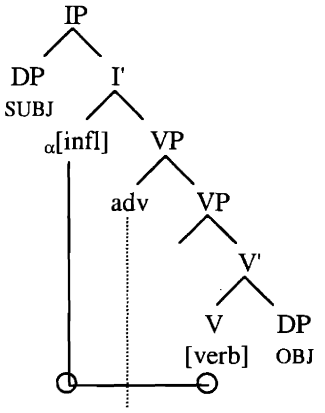


b. Sam does not like green eggs and ham.



Bobaljik notes that adjacency between the verb and I is not disrupted for the purposes of morphological merger by intervening adverbs. Though an adverb may be positioned syntactically between I and the verb, *do*-support is not required, and, in fact, is not permitted. The tree in (25) presents the failure of adverbs to block merger.

(25)
a. An adverb never disrupts adjacency.
b. Tony completely trusts Christopher .



Bobaljik attributes the difference between negation and adverbial modification for the purposes of morphological merger to the structural difference between adjoined and non-adjoined specifier material. Adverbs, as adjoined material, do not alter the structural relation between inflection and the verb, and thus do not affect the relevant notion of adjacency.[40] Bobaljik notes that this is one aspect of the many argument-adjunct asymmetries known to have grammatical consequences, and that although it is somewhat ad hoc to appeal to this asymmetry without being able to state exactly how it plays out in the morphological component, the fact remains that merger takes place despite the presence of intervening adverbs.

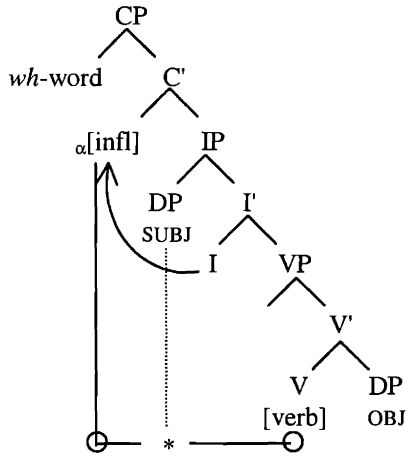
This approach to the interaction of lowering and *do*-support extends quite naturally to interrogatives. Not only does it correctly predict the obligatoriness of *do*-support in yes-no questions, but it predicts the asymmetry between subject and non-subject *wh*-questions with respect to *do*-support. *Do*-support is always required in yes-no questions because, following raising of I to C, the inflectional affix will always be separated from the verb by the subject in [spec, IP]. This is not always the case in *wh*-questions, even though I moves to C in *wh*-questions as well. In subject *wh*-questions, *do*-support is obligatorily absent, while in non-

[40] Note that this approach is crucially incompatible with that of Cinque (1999), in which adverbs are specifiers of a series of independent functional heads. Cinque's structures predict tense lowering to be impossible on Bobaljik's approach due to the presence of the intervening functional head.

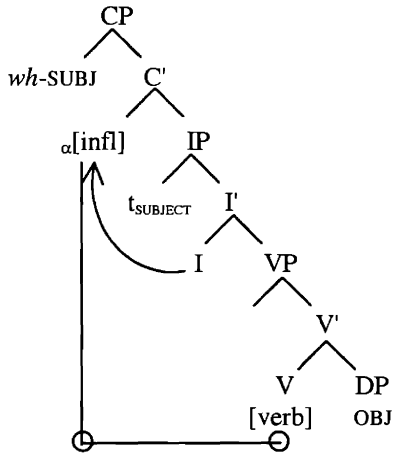
subject *wh*-questions, it is required. This is because the subject raises to [spec, CP] in subject *wh*-questions (26)a, where it no longer intervenes between tense in C and the verb, but it remains in situ in non-subject *wh*-questions (26)b, where it does intervene between tense in C and the verb (as in polar interrogatives).

(26)

a. What did Sam eat? (cf. *What Sam ate?)



b. Who ate green eggs and ham? (cf. *Who did eat...)

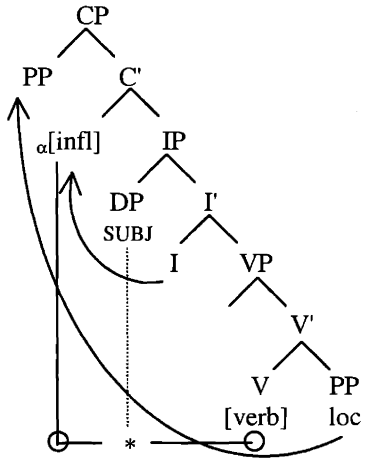


This approach also yields an explanation for the difference between PP-oriented questions concomitant with Locative Inversion and those without it, as illustrated in (27). When the PP is the subject of a Locative Inversion clause, questioning the PP takes the subject out of the way of tense and the verb, as in (27)b. When the PP is extracted from within the VP in the non-Locative Inversion counterpart, (27)a, the subject remains in situ and blocks adjacency between tense and the verb. Thus, PP-questioning in Locative Inversion resists *do*-support, while PP-questioning otherwise demands it.

(27)

a. Into which auditorium did throngs of undergraduates pour?

a.' *Into which auditorium throngs of undergraduates poured?

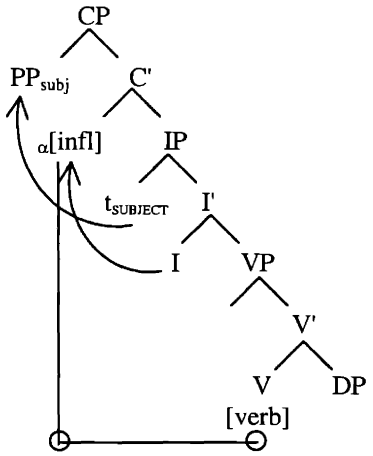


from: Throngs of undergraduates poured into Wong auditorium.

questioning PP without LI → obligatory *do*-support

b. Into which auditorium poured throngs of undergraduates?

b.' *Into which auditorium did pour throngs of undergraduates?



from: Into Wong auditorium poured throngs of undergraduates.

questioning PP with LI → *do*-support ungrammatical

Finally, it must be noted that tense affix-verb merger under adjacency is disrupted not only by subjects, but by objects as well. Thus, the difference between subjects and adverbs for adjacency assessment seen so far is truly reflective of a more general argument-adjunct asymmetry. Though we have seen no cases in which an object intervenes syntactically between tense and the verb in the English examples above, Bobaljik's understanding of the requirements of the tense affix provides insight into just such cases in other Germanic languages.[41] Specifically, Bobaljik reinterprets Holmberg's generalization in light of the need of an inflectional affix to be adjacent with the verb.

Holmberg's generalization, stated simply, captures the fact that object shift must be accompanied by verb-raising. The generalization applies to those Germanic languages with overt object shift and verb raising, which, apparently, excludes English.[42] Bobaljik's insight into the phenomenon is that in SVO languages with overt object shift, unless the verb raises higher than the object, a shifted object intervenes between inflection and the verb, blocking merger. Without a *do*-support like operation, the tense affix is stranded, resulting in ungrammaticality. Thus, object shift without verb raising is ruled out. Bobaljik assumes that object shift is always leftwards, such that shifted objects have no effect on the relationship between the verb and Infl in

[41] I will return the question of object shift in English below in the treatment of pseudogapping.

[42] Koizumi (1993, 1995), however, argues for both overt object shift and verb raising in English.

SOV languages, given that in such right-headed languages, the verb remains adjacent to Infl on its right regardless of the position of the object.

The following data and trees are taken from Bobaljik (1996) to illustrate the preceding points. The main diagnostic for object shift is the position of the object relative to VP-adjoined adverbs, of which negation is one. It is generally understood that definite objects undergo shift, while indefinite objects do not. The Icelandic data in (28) illustrate this difference.

(28) Icelandic

a.	i fyrra	máluðu	stúdentarnir	[$_{VP}$ ekki	hús]
	last year	painted	students.the	not	house
	The students didn't paint a house last year.				
b.	i fyrra	máluðu	stúdentarnir	húsið	[$_{VP}$ ekki *trace*]
	last year	painted	students.the	house.the	not
	The students didn't paint the house last year.				

The data in (28) show the correlation of definiteness with object shift, but both cases also involve verb raising. There are other cases in Germanic in which the verb doesn't raise, making object shift impossible; for example, in (non-bridge) embedded clauses in Mainland Scandinavian, and in non-finite complements of modal verbs in Icelandic, the verb stays within the VP. In such cases, object shift is impossible.

(29)

a.	Det	var	godt	[at	Peter		[$_{VP}$ ikke	[købte	**den**	]]]
	it	was	good	that	Peter		not	bought	it	
b.	*Det	var	godt	[at	Peter	**den**	[$_{VP}$ ikke	[købte	*trace*	]]]
	it	was	good	that	Peter	it	not	bought		
	'It was good that Peter didn't buy it.'								[Danish (Vikner 1991:293; in Bobaljik 1996)]	
c.	*Risarnir	ættu	[að ríkisstjórnirnar				[$_{VP}$ éta	*trace*]]		
	giants.the	ought	to governments.the				eat			
	'The giants ought to eat the governments.'								[Icelandic (Thráinsson 1993:304; in Bobaljik 1996)]	

(30)

a.	Hvorfor	har	Peter	[$_{VP}$ ikke	købt	den]?	
b.	*Hvorfor	har	Peter	den	[$_{VP}$ ikke	købt	*trace*]?
	why	has	Peter	it	not	bought	it ?
	'Why hasn't Peter bought it?'						[Danish (Vikner 1991:293; in Bobaljik 1996)]
c.	Hann	hefur		[$_{VP}$ aldrei	lesið	bókina]	
d.	*Hann	hefur	bókina	[$_{VP}$ aldrei	lesið	*trace*]	
	He	has	book.the	never	read	book.the	
	'He has never read the book.'					[Icelandic (Thráinsson 1995:20; in Bobaljik 1996)]	

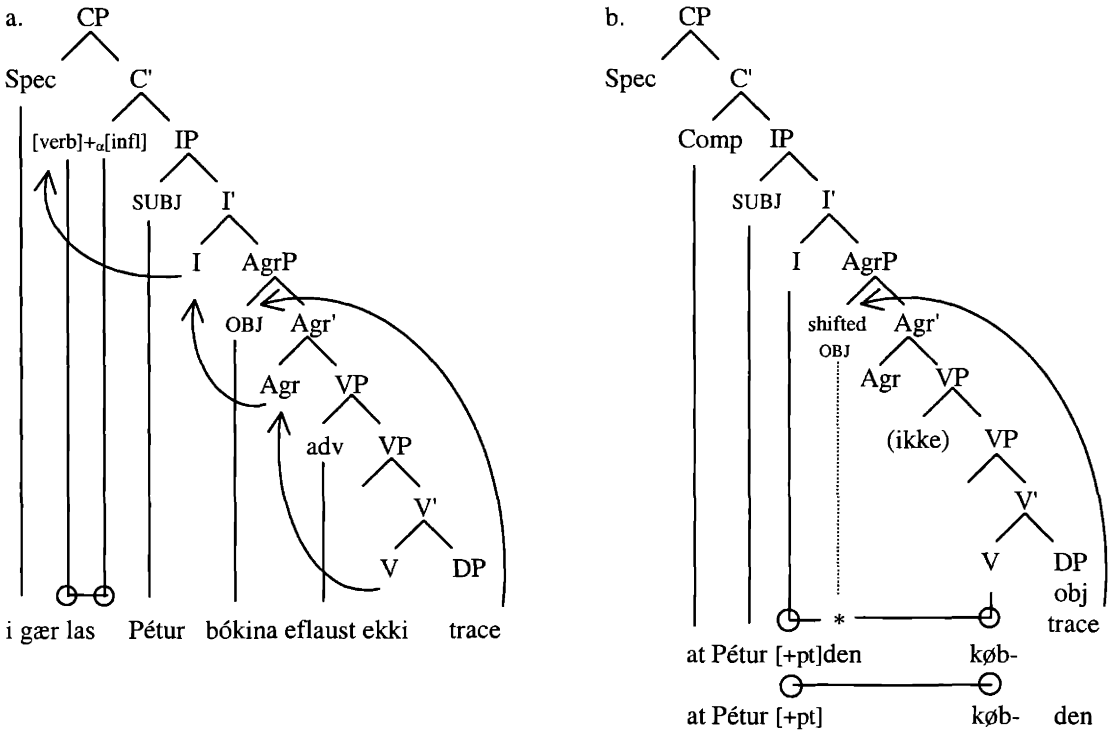
The trees for (31), given in (32), represent how, from the perspective of a "merger under adjacency" account, object shift without verb raising is ruled out.

(31)

a. i gær las Pétur bókina [$_{VP}$ eflaust ekki]
yesterday read Peter book.the undoubtedly not
'Peter undoubtedly didn't read the book yesterday.' [Icelandic (Vikner 1991:300; in Bobaljik 1996]

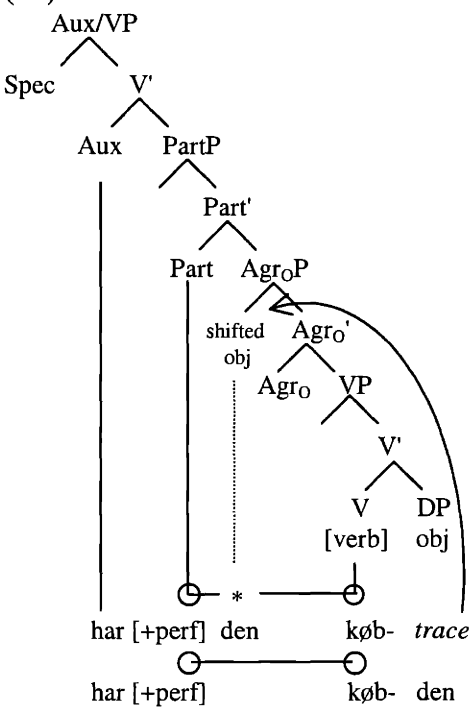
The tree in (32)a shows the raised verb able to merge with the inflectional affix. The tree in (32)b shows that this merger is blocked by a shifted object in the absence of verb raising.

(32)



The tree in (33), corresponding to the Danish examples in (30), shows that a shifted object blocks adjacency, and thus merger, between the head of PartP and the verb as well.

(33)

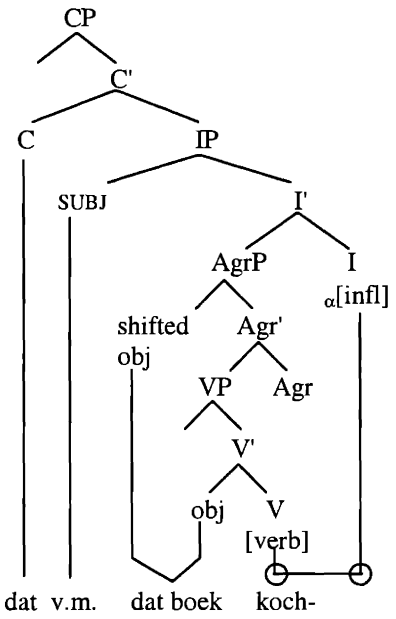


The data in (34), and the corresponding tree in (35), provide an example from Dutch, an SOV language, of the irrelevance of object shift for merger of the inflectional affix with the verb.

(34)

...dat veel mensen [$_{AgrOP}$ dat boek [$_{VP}$ gisteren gekocht]] hebben]
that many people that book yesterday bought have
'...that many people bought that book yesterday.' [Dutch (in Bobaljik 1996)]

(35)



To summarize, Bobaljik shows that the tense affix and the verb must be adjacent in order to undergo morphological merger in Germanic. Merger is prevented by the presence of an intervening argument (or non-adverbial negation), but not by an adjunct. The offending argument may be the subject when tense raises to C without the *wh*-subject raising, or a shifted object when the verb does not raise.

3.3.1 Pseudogapping

We have already seen that the requirement of in situ [Neg] for adjacency with the verb in English is interrupted by an intervening subject in the imperative. Based on this similarity to the requirement tense has for adjacency with the verb, we might expect other similarities between [Neg] and the tense affix with respect to adjacency to the verb. In fact, adverbs and shifted objects behave identically for the purposes of the relationship between [Neg] and the verb as they do for tense and the verb. Intervening adverbs are permitted; intervening objects are not. Note the relevant data with intervening adverbs, in the imperative (36)a, and in the declarative (36)b.

(36)

a. Do not ever rob a bank!

b. The cops do not completely trust the robbers.

As predicted based on the parallels with tense, adverbs do not cause an intervention effect for [Neg] and the verb. The fact that adjacency disruption occurs neither here nor in the case of tense is a boon for Bobaljik's generalization about the adjunct-argument distinction in adjacency assessment. Bobaljik (1996) could only speculate about why adverbs do not act as interveners in order to capture the fact that they simply do not do so; here, though there is no more obvious a reason why adverbs should be invisible for merger, the facts are replicated, lending the distinction greater credibility at least in terms of the empirical coverage.

Bobaljik's treatment of the Germanic object shift facts make a further prediction about the behavior of [nɑt] qua in situ [Neg]. A shifted object that occurs between [Neg] and the verb in English, if [Neg] has not raised, should cause ungrammaticality by preventing negation from satisfying its adjacency requirement. After all, Bobaljik's account predicts that any argument that intervenes, not just subjects, will disrupt adjacency. There is at least one case in which this prediction can be tested – the case of pseudogapping. Lasnik (1999) argues that the syntax of pseudogapping involves object shift out of the verb phrase, prior to VP ellipsis. An example of pseudogapping from Lasnik is in (37)a; (37)b illustrates the gist of the analysis.

(37)

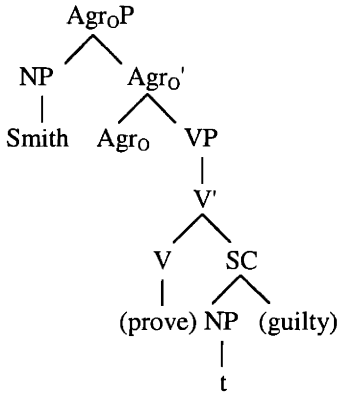
a. The DA proved Jones guilty, and the Assistant DA will Smith.

b. The DA proved Jones guilty, and the Assistant DA will Smith$_i$ [$_{VP}$ ~~prove t$_i$ guilty~~]

The relevant part of Lasnik's analysis of (25) is as in (26).

(38)

The DA proved Jones guilty and the Assistant DA will Smith.



We can assume that the phrase that dominates Lasnik's Agr$_O$P is TP, or, when present, ΣP. Consider the case of a negative clause similar to (37), in which ΣP headed by [Neg] dominates the structure in (38). The object remnant, in its shifted position, will intervene between [Neg]

and the verb. The prediction of the analysis being developed here is that a pseudogapping clause with in situ [Neg] will be ungrammatical due to object intervention, while a pseudogapping clause in which [Neg] has raised to T will be grammatical. Note that, indeed, the behavior of negation in pseudogapping mirrors that in overt subject imperatives; it is grammatical with [n̩t], but ungrammatical with [nɑt].[43]

(39)
a. Although I don't like pizza, I do steak.
b. Although I do like pizza, I don't steak.
c. *Although I do like pizza, I do not steak.

Following Lasnik, the representations of the sentences in (39) can be assumed to be as in (40).[44]

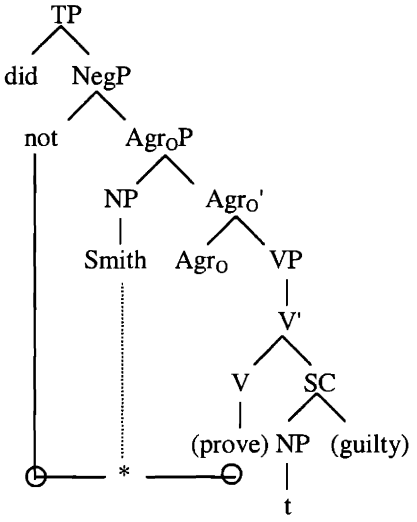
(40)
a. Although I don't like pizza, I do steak$_i$ [$_{VP}$ ~~like t$_i$~~]
b. Although I do like pizza, I don't steak$_i$ [$_{VP}$ ~~like t$_i$~~]
c. *Although I do like pizza, I do not steak$_i$ [$_{VP}$ ~~like t$_i$~~]

The object remnant, *steak*, raises out of the VP prior to VP ellipsis. What looks much like simple verb gapping above actually involves VP ellipsis following leftward raising of the object. Thus, the object remnant intervenes between in situ [Neg] and the verb *like* in *v*, resulting in ungrammaticality in (39)/(40)c. When [Neg] is in T, as it is proposed to be in (39)/(40)b, it does not show the same requirement for adjacency with the verb as in situ [Neg], or else the (b) examples would suffer from the same problem as the (c) examples. This is the same as the pattern with imperatives, in which overt subject imperatives with [n̩t] do not suffer from the argument intervention that overt subjects imperatives with [nɑt] do.

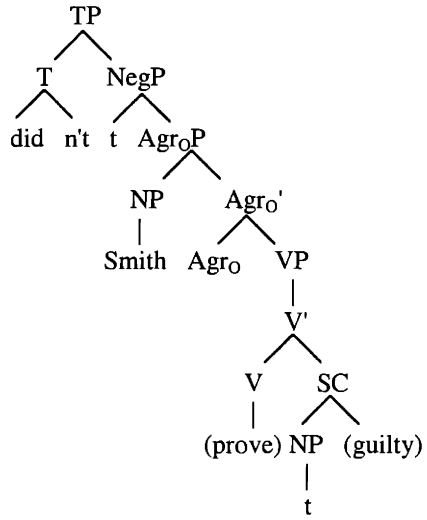
Turning Lasnik's analysis of (37) into the negative counterpart, we get (41) and (42).

[43] Some speakers accept (39c) with stress on negation and a pre-remnant pause, "I do nót _ steak" (David Pesetsky, p.c.). It would be interesting to investigate whether this reflects a representation in line with Jayaseelan's analysis, in which the remnant is right-extraposed. Perhaps some speakers allow both Lasnik's and Jayaseelan's representations of pseudogapping, with Jayaseelan's requiring the special phonological phrasing above for *not*-negation.
[44] These examples are based on Baltin (2000), who gives (39)a. Baltin and Lasnik both propose leftwards raising of the object remnant, but differ slightly as to the precise identity of the constituent that shifts and where it lands. Neither Baltin nor Lasnik consider the negative cases discussed here.

(41)
*The DA proved Jones guilty but the Assistant DA did not Smith ~~prove guilty~~.



(42)
The DA proved Jones guilty but the Assistant DA didn't Smith ~~prove guilty~~.



Lasnik's analysis of pseudogapping differs from that of Jayaseelan, who claims that the object remnant escapes VP ellipsis through rightward extraposition, similar to Heavy NP Shift.. Lasnik believes this approach to be faulty since the conditions on pseudogapping and HNPS are non-overlapping. Lasnik's approach takes overt object shift and verb raising to be part of the typical syntactic derivation in English, following Koizumi (1993; 1995). Object shift without verb raising is generally disallowed because the verb carries a strong feature that requires it to raise. However, if the VP is deleted, as it is in pseudogapping, then that strong feature is eliminated along with everything else in the phrase. If Jayaseelan were correct, then the shifted

object would not occupy a structural position between [Neg] and the verb. However, the approach to [Neg]'s adjacency requirement predicts the actual patterns of grammaticality in (41)-(42) on Lasnik's analysis, while it would predict no difference on Jayaseelan's approach. Therefore, the proposed adjacency requirement on [Neg] bolsters Lasnik's conclusions that the object remnant has raised leftward, not rightwards, in pseudogapping; the inability of [nɑt] to occur in cases involving VP ellipsis serves as a diagnostic for the occurrence of object shift to the left. The observed contrast between [nɑt] and [n̩t] is unexplained if the object remnant is extraposed rightward before VP ellipsis.

Another prediction of the analysis of [Neg] developed above is also borne out by further pseudogapping data. The prediction is that non-argument remnants in pseudogapping should have no effect on in situ [Neg], neutralizing the contrast between [nɑt] and [n̩t] in pseudogapping. In fact, as the following data show, adjunct remnants permit *not* and *n't* equally.[45]

(43)

a. Although I didn't visit Sally after the party, I did__after the lecture.
b. Although I did visit Sally after the party, I did not __ after the lecture.
c. Although I did visit Sally after the party, I didn't __ after the lecture.

Baltin and Lasnik argue for raising of the adjunct remnants, on a par with object raising. This shows that the adjunct remnants, like adverbs, are invisible for in situ [Neg]'s purposes, even if they intervene, in their raised position, between [Neg] and the verb. This is further evidence that the argument/adjunct asymmetry that holds for Adjacency Assessment in tense lowering is matched for [Neg]. Just as adverbs do not intervene for the purposes of morphological merger under adjacency between tense and the verb, adjuncts do not intervene for the purposes of establishing adjacency between in situ [Neg] and the verbal heads of its complement.

Since the adjacency requirement is proposed to hold of [Neg], more must be said about why adjacency can be satisfied by raised [Neg] when it can't be satisfied by in situ [Neg]. The proposal is that raised [Neg] is in a complex head with T, and T always contains a verbal element (auxiliary, modal, or *do*) when ΣP is in the clause, so [Neg]'s adjacency requirement is satisfied via locality under sisterhood with a verbal element within the T complex when it raises. I will flesh out the details of this approach in Section 3.4.2.

[45] These examples are constructed based on non-negative examples given by Baltin.

Note that even though the verb is not pronounced in the pseudogapping examples above, it still must be available for assessment of adjacency. Below, I will also spell out the details of how the verb is visible for adjacency assessment; for the time being, we can observe that unpronounced/elided verbs in general do indeed satisfy [Neg]'s adjacency requirement with some cases of simple VP ellipsis.

(44)

a. Although Chris likes pizza, Tony doesn't [$_{VP}$ ~~like pizza~~]

b. Although Chris likes pizza, Tony does not [$_{VP}$ ~~like pizza~~]

In (44)b, we have a case in addition to the pseudogapping case where [Neg] is licensed by adjacency with a verb that is not actually spelled out overtly, or else [Neg] could not be spelled out as [nɑt] under the present analysis. The pseudogapping case should convince us that the unpronounced verb is still the licenser under adjacency because intervention of the raised object blocks adjacency, resulting in ungrammaticality. The question that needs to be addressed is why there it makes no apparent difference whether or not the licensing adjacent verbal element is spelled out overtly. One answer to this is that at the stage at which adjacency is assessed, there is no difference between verbs that will be pronounced and those that will not (i.e. those that will be elided[46]).

Work by Embick and Noyer (2001) is relevant to this issue. Embick and Noyer propose a theory of post-syntactic dependencies between elements. To the extent that the behavior of [Neg] matches that of the tense affix, I will treat [Neg]'s adjacency requirement as a dependency relation analogous to the dependency of the tense affix.

For Lowering to take place, the terminal node that undergoes Lowering must be in a particular local relationship with the terminal node to which it moves. Tense must not be separated from the verb by any argument, or else Lowering is impossible. The case of [Neg] differs minimally from tense in that the same locality conditions/adjacency must hold, but the terminal node does not actually merge with the element with which it establishes adjacency. So, we learn something more about the nature of Lowering for the tense affix. It involves both assessing whether the element it moves to is properly local/adjacent, then it involves actually moving to that element. Teasing out the subparts of Lowering sheds light on how [Neg] and T can be sensitive to the same structural conditions on adjacency even though only tense Lowers.

[46] This relies on the assumption that ellipsis is a relatively late (i.e. phonological) deletion of material that is nonetheless syntactically represented (*cf.* Fox 2000, Merchant 2001).

Since these operations are computed over hierarchical structure, they take place prior to Vocabulary Insertion (VI). The terminal nodes have yet to be replaced by phonological exponents (on the assumption that VI replaces the terminal node, and after VI, hierarchical structure is linearized). Adjacency Assessment involves relations between (features of) terminal nodes, rather than particular VIs. This is crucial in Embick and Noyer's system, because post-syntactic movements that are sensitive to the identity of the VI do not have the character of rearrangements of hierarchical structure, but rather rearrangement of linear order. This seems right for tense because of the structural difference between arguments and adjuncts makes a difference for whether or not there is intervention. If linear adjacency counted, there should be no expected difference between an intervening argument and adjunct – both types would be linearly between tense and the verb. By extension to [Neg], since the same adjunct/argument asymmetry holds, [Neg]'s adjacency requirement reflects a property of the terminal node [Neg] for structural adjacency to another terminal node.

These considerations provide a good candidate for the nature of the element that [Neg] must establish adjacency with – it can only be some feature of a terminal node. Here, the working hypothesis is that it is a verbal feature.

The analysis based on Embick and Noyer (2001) also provides good reason to be comfortable with the idea that the ultimate overt or covert status of the verbal element spelled out in the position [Neg] establishes adjacency with is irrelevant. This is because Adjacency Assessment necessarily occurs pre-Vocabulary Insertion – a point at which it is too early to determine not clear how any of the terminal nodes will be spelled out. Further evidence for this conclusion comes not only from ellipsis (simple and within pseudogapping), but from other cases where a verbal element can be reasonably assumed to be structurally represented adjacent to [Neg] even if not pronounced there. For example, in copular clauses, [nɑt] is licensed even when there is no overt verbal element is pronounced in the head of its complement; in (45), the copula occurs to [nɑt]'s left.

(45)
a. Aurora isn't a criminal.
b. Aurora is not a criminal.

However, on the copy theory of movement, if the copula has raised from below [Neg] to T, where it is spelled out, then the copy of the copula to the right of [Neg] contains the relevant feature for adjacency assessment.

The same is true in auxiliary raising – the verbal elements remaining to the right of [Neg] after the highest auxiliary raises do not occupy the head of its complement, but [nɑt] is permissible nonetheless.

(46)
a. Flap has not robbed a bank lately.
b. Flap has not been robbing banks lately.

However, the copy of the raised copula or auxiliary, which contains the relevant feature, is local for the purposes of adjacency assessment, despite the fact that copies are not pronounced.

Finally, the same pattern is evident in VP-fronting.

(47)
a. Flap promised to visit Emma in jail, and visit her he did ~~visit her~~.
b. Flap promised to visit Emma in jail, but visit her he did not ~~visit her~~.
c. Flap promised to visit Emma in jail, but visit her he didn't ~~visit her~~.

The head of the copy of the VP is available for adjacency assessment, though the copy is not pronounced.

These considerations suggest that Adjacency Assessment is computed over hierarchical structure in which what is visible are the feature bundles that terminal nodes are composed of. This is the structure made available by the syntactic computation to PF and serves as input to the morphological component, which includes operations like Adjacency Assessment and Lowering.

We have seen that two things are at issue for the spellout of negation: the position of [Neg], and whether [Neg]'s adjacency requirement can be met. If [Neg] has raised to T, Vocabulary Insertion replaces the head of the [Neg] chain with [n̩t]. If [Neg] has not raised, Vocabulary Insertion replaces [Neg] with [nɑt] as long as [Neg] is adjacent to a verbal element in its sisterhood domain. Since unraised [Neg] is not adjacent to the verbal element that heads its sister in overt subject imperatives and in pseudogapping where the remnant is the object argument, these clauses are ungrammatical.

(48)
a. *Do not you slam the door!
b. *Although Tony does eat steak, he does not pizza!

In covert subject imperatives, and in pseudogapping where the remnant is an adjunct, these clauses are grammatical with unraised [Neg].

(49)
a. Do not slam the door!
b. Although Tony drank champagne after the wedding, he did not after the funeral.

In VP ellipsis, VP fronting, copular clauses, and auxiliary raising, unraised [Neg] is licensed by adjacency to the relevant verbal element – either a copy or an unpronounced verbal element.

(50)
a. Chris likes pizza, but Tony does not ~~like pizza~~.
b. Flap promised to visit Emma in jail, but visit her he did not ~~visit her~~.
c. Aurora is not ~~is~~ a criminal.
d. Aurora has not ~~has~~ been robbing banks.

In all of the cases (48)-(50), [nt] is possible because, as the spellout of raised [Neg], it realizes a [Neg] whose adjacency requirement is met within the complex T it appears in.

Finally, in polar interrogatives and simple declaratives, the distribution of [nt] and [nɑt] fall out strictly from the conditions on Vocabulary Insertion, as in situ [Neg] is always licensed through adjacency to the main verb.

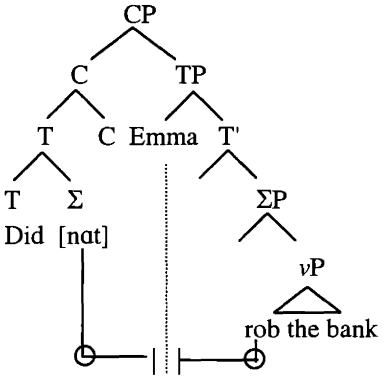
(51)
a. Emma does not rob banks.
b. Emma doesn't rob banks.
c. Didn't Emma rob a bank?
d. Did Emma not rob a bank?

3.3.2 Adjacency and allomorphy

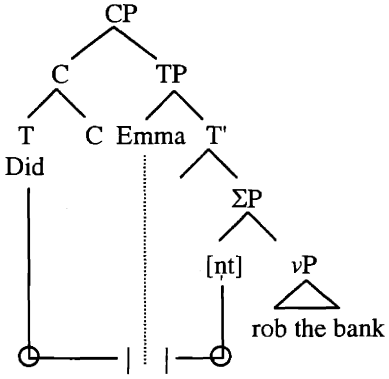
It is important to underscore the division of labor between the adjacency requirement and the conditions on Vocabulary Insertion in determining whether [nɑt] can be inserted. Otherwise, a potential redundancy in the analysis exists. For example, in the polar interrogatives, the ungrammaticality of (52)a-b could possibly be seen to be due to the inability of the negative allomorphs to satisfy their respective adjacency requirements, although the account is meant to attribute the ungrammaticality to the fact that the wrong allomorphs realize [Neg] in the two cases below.

(52)

a. *Did not Emma rob the bank?



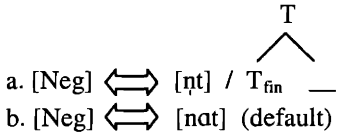
*Did Emman't rob the bank?



In (52)a, spelling out raised [Neg] as [nɑt] both contravenes the conditions on vocabulary insertion into [Neg] in (18), and results in intervention of the subject argument between [nɑt] and the verb. Likewise, (52)b contravenes (18), and results in intervention of the subject argument between [n̩t] and T, with which [n̩t] qua [Neg] usually establishes adjacency. However, given the considerations in the previous subsection, the redundancy in the explanation of the ungrammaticality in (52) is only apparent. It is not actually the case that there are two explanations for the badness of the examples in (52).

First, we must recall that the adjacency requirement holds of [Neg], not of the particular vocabulary items that realize it. This fits into the picture in which Adjacency Assessment is computed over hierarchical structure, before Vocabulary Insertion replaces the feature of the terminal node with which [Neg] requires adjacency and linearizes the string. This means that Adjacency Assessment exerts its effects before Vocabulary Insertion, i.e. before the identity of the vocabulary item that realizes [Neg] is known. In effect, [Neg] can only be spelled out as [nɑt] if [Neg] is adjacent to a verbal feature in its sisterhood domain. So, (18) must be revised as follows: [n̩t] has a marked insertion context as in (53)a, while [nɑt] is the default, or elsewhere, Vocabulary Item for [Neg].

(53) revised insertion contexts for [Neg] vocabulary items



It cannot be the case that [n̩t] or [nɑt] are freely inserted into [Neg] and ruled out after insertion due to failure to satisfy adjacency.

The vocabulary items [n̩t] and [nɑt] are inserted into distinct environments, not freely wherever [Neg] appears. The picture in (53) gives us the strongest claim of complementary distribution for the two [Neg] spellouts. If this were not the case, the analysis would indeed redundantly rule out (52), but it would also introduce significant structural ambiguity. If either vocabulary item could freely realize [Neg] as long as adjacency is met, a given negative clause could have two possible structural representations with no corresponding interpretive alternatives. From the point of view of acquisition, this is an unlikely model of the grammar – what would lead the child to posit multiple ambiguous structures with no reflex elsewhere?

Such ambiguity is not only superfluous, but it would create problems in another area. If [Neg] were always both in T and in situ, and could be spelled out in either position modulo adjacency assessment, we would lose insight into an interesting phenomenon having to do with effects exerted by [n̩t] on items that occur in T. For example, reduced auxiliaries are incompatible with [n̩t], and *do* and certain modals are realized in phonologically idiosyncratic forms with [n̩t], as pointed out by Zwicky and Pullum (1983).

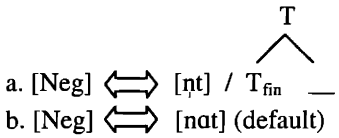
(54)
a. *I've'n't seen Tony since last year.
b. *I [du]n't/[kæn]n't speak Italian.

Chapter 4 deals with these and related facts. For now it suffices to note that these facts are best understood as local effects of the presence of [Neg] in T, as they are not due to the simple presence of negation in the clause, but to negation spelled out as [n̩t], i.e. due to raised [Neg]. If [Neg] always raised, and was always in both T and ΣP, we would lose a significant generalization about the effect exerted by the presence of [Neg] in T on other elements in the T complex.

3.4 Adjacency Assessment by [Neg]

The Vocabulary Item insertion statements in (55) are responsible for the distribution of [n̩t] and [nɑt], but alone do not alone account for the grammaticality of sentential negation.

(55) revised insertion contexts for [Neg] vocabulary items



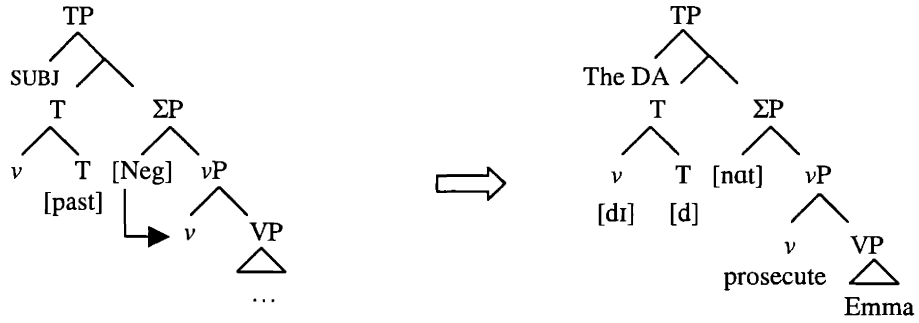
Several issues require attention. The first is how, and where in the derivation, [Neg] establishes adjacency with a verbal element when not in T. Second, on the assumption that the adjacency requirement is a property of [Neg] itself, and does not just hold of [Neg] in that particular position, how is that [Neg] in T satisfies adjacency? Finally, we must ask how [Neg] comes to be in T when it raises, and whether there is any motivation for the position that it indeed does, other than the simplified picture of the morphological analysis in (53) that it provides.

3.4.1 Locality condition on adjacency in the morphology

The terminal node from which ΣP projects is the morpheme/feature bundle [Neg]. As a morphosyntactic feature, it is visible for morphological operations after the narrow syntactic computation. As discussed, the mirrors the tense affix in terms of its adjacency requirement; consequently, I will treat it as Embick and Noyer treat terminals subject to Lowering. Thus, [Neg] is sensitive to hierarchical structure in terms of the features with which it can establish adjacency. The domain within which it can assess adjacency with the required element is limited to its complement; adjacency with the head of its complement is required. Just as the tense affix must be adjacent to *v* for Lowering to proceed, [Neg] must be adjacent to the head of its complement. The difference is that this dependency holds without subsequent lowering of the [Neg] head. Also as with tense, if the specifier of *v*P is filled, adjacency is disrupted. On the other hand, if there is material adjoined to *v*P, adjacency is not disrupted.

We see in (56) that in simple declaratives, [Neg] is adjacent to the head of its sister, *v*P, and thus meets the adjacency condition.

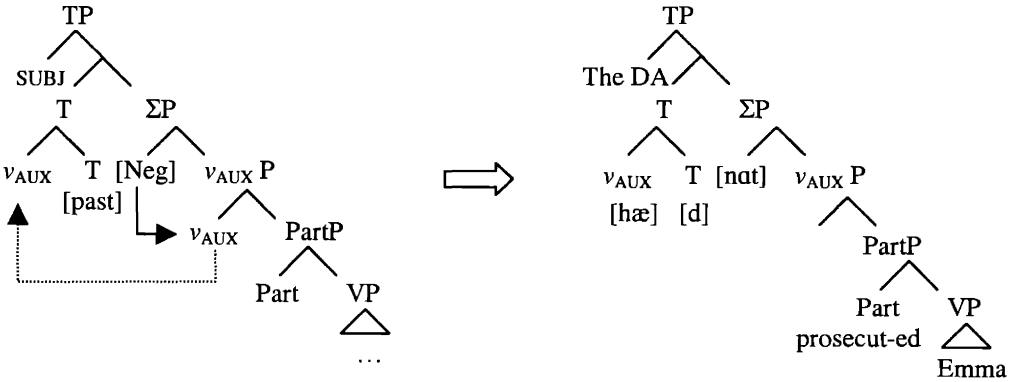
(56)
The DA did not prosecute Emma.



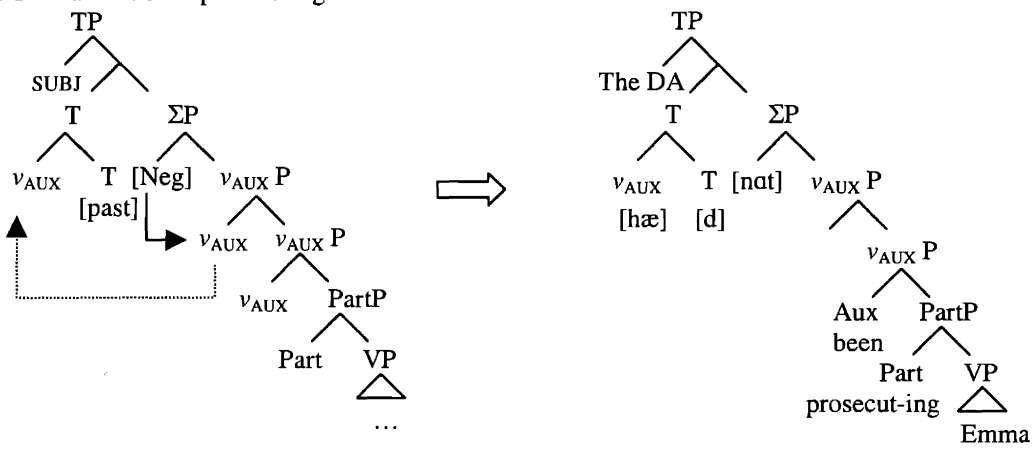
I adopt Embick and Noyer's (2001) analysis of *do*-support here. Their proposal is that *do* is the spellout of a default *v* inserted into T in the syntax when T fails to merge directly with *v*P and no *v* raises to T. When ΣP is in a structure without an auxiliary/copula, then, *v* is inserted into T.

The following trees illustrate for declaratives with auxiliaries, interrogatives, copular clauses, and VP-fronting how in situ [Neg], spelled out as [nɑt], conforms to the adjacency requirement. Following that, I illustrate how [Neg]'s failure to conform to the adjacency requirement accounts for the inability of [nɑt] to occur in the case of pseudogapping with an object remnant and in the overt subject imperative. Cases with adjunct material (adverbs, PP adjuncts) between [Neg] and the head of its complement will be excluded; it should simply be kept in mind that for a less than well understood reason, such material seems does not alter the structural relationship between [Neg] and the head of its complement.

(57) declarative with one auxiliary
The DA had not prosecuted Emma.



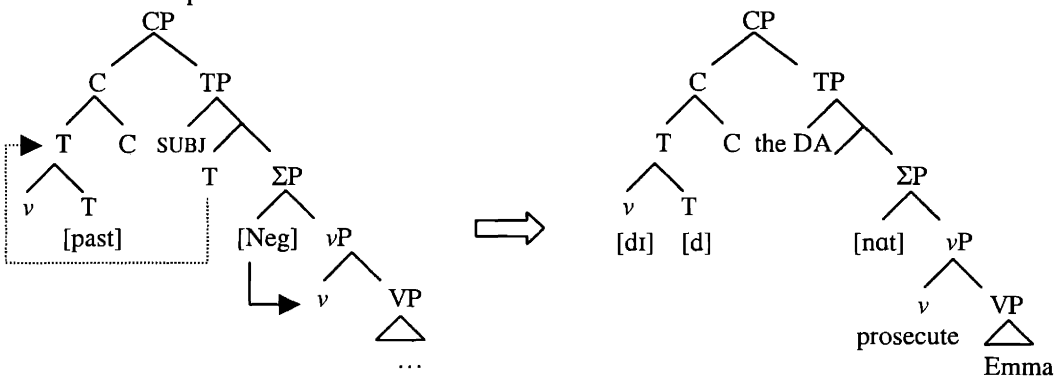
(58) declarative with multiple auxiliaries
The DA had not been prosecuting Emma.



In these cases, the copy of the raised auxiliary licenses [Neg] – even when no auxiliary is pronounced to the right of [Neg], on a copy theory of movement, there is a structurally represented verbal element adjacent to [Neg].[47]

In section 3.4.4, I return to the apparent violation of the Head Movement Constraint caused by auxiliary raising over [Neg] to T.

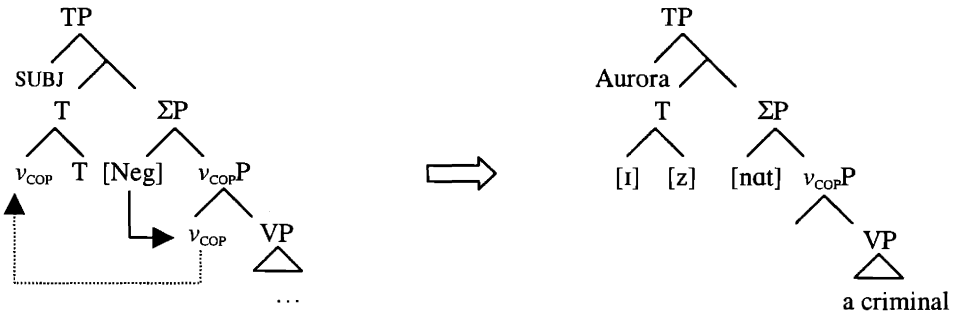
(59) polar interrogatives
Did the DA not prosecute Emma?



[47] Alternatively, if one wanted to maintain that head movement is PF-movement, then the only place where the auxiliary is structurally represented is in its position right-adjacent to [Neg]. This possibility is entirely consistent with the analysis developed here, and will in fact be adopted later in the chapter.

(60) copular clause

Aurora is not a criminal.

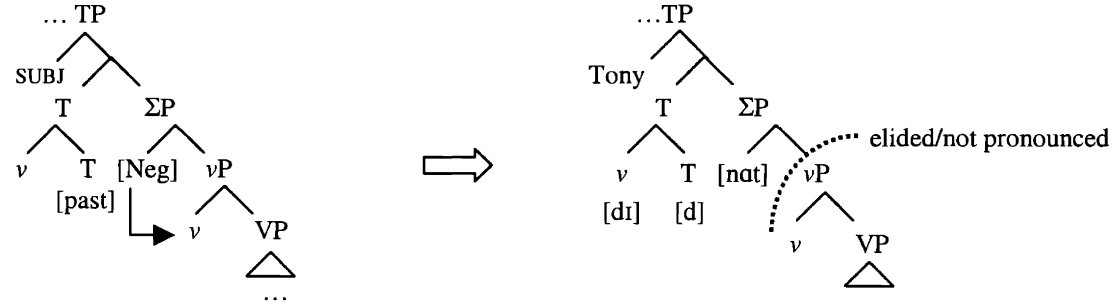


In the copular clause, the verb raises to T; the copy left behind licenses [Neg].[48]

The ellipsis case works identically to the simple declarative. If ellipsis is treated as a late deletion, this follows naturally. The syntactic structure provides an adjacent *v* for [Neg] - even if it is ultimately not phonologically contentful, the structurally represented *v* licenses [Neg].

(61)

(Chris ate pizza, but) Tony did not.

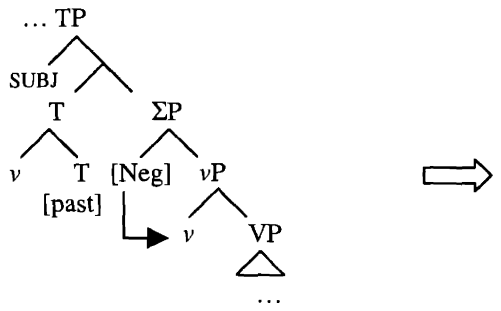


With VP-fronting, the copy left behind licenses [Neg]. Regardless of the identity of the landing spot for the raised material, its copy provides [Neg] with appropriate adjacent material.

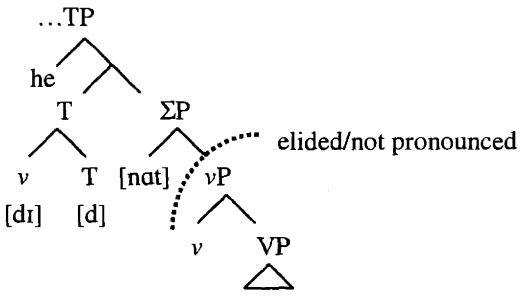
[48] This brings up the question of why exactly raising of BE occurs rather than *do*-support, if default *v* insertion into T is supposed to occur as a result of T not merging directly with *v*P. I assume that the Embick and Noyer (2001) analysis of *do*-support analysis works in the following way: when T doesn't merge with *v*P, a default *v* is inserted into T. It seems that when a *v* capable of being attracted to T is present, it moves there instead of default *v* insertion. This may seem problematic in that it seems like a preference for move over merge when the literature supports a preference for merge over move. The question is at what point does default insertion of *v* into T occur – based on the copular case, it is presumably not simultaneous with merger of T above ΣP. Raising of *v* puts T into the same configuration as insertion of *v* by Vocabulary Insertion, and since this configuration is created whenever BE is present, raising seems to supercede default *v* insertion.

(62)

(Flap promised to visit Emma in jail, but visit her) he did not ~~visit her~~



(Flap promised to visit Emma in jail, but visit her) he did not ~~visit her~~

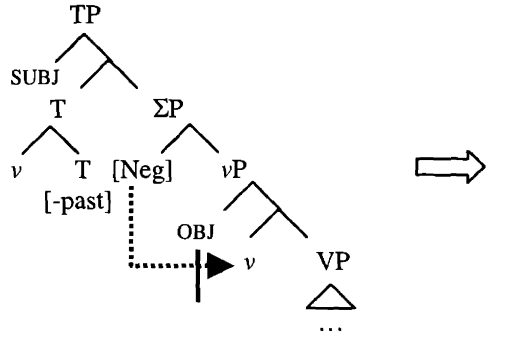


Now, the pseudogapping and overt subject imperative cases are the cases in which [nɑt] fails to appear grammatically. In pseudogapping, this is because [spec, *v*P] is occupied by the shifted object, while in the imperative, it is because the [spec, *v*P] position is the surface subject position.

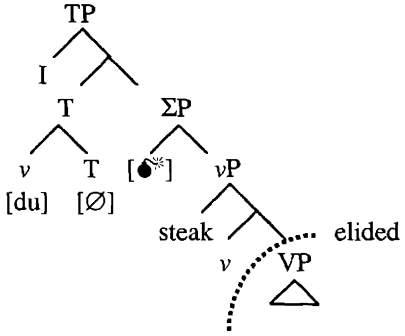
Consider the pseudogapping case first. Recall that Lasnik's analysis is that the object remnant has raised out of the VP prior to VP ellipsis; the data presented above with negation in pseudogapping show that only [nt] may appear when the remnant is an object.

(63)

*(Although I do like pizza,) I do not steak$_i$ [$_{VP}$ ~~like t$_i$~~]



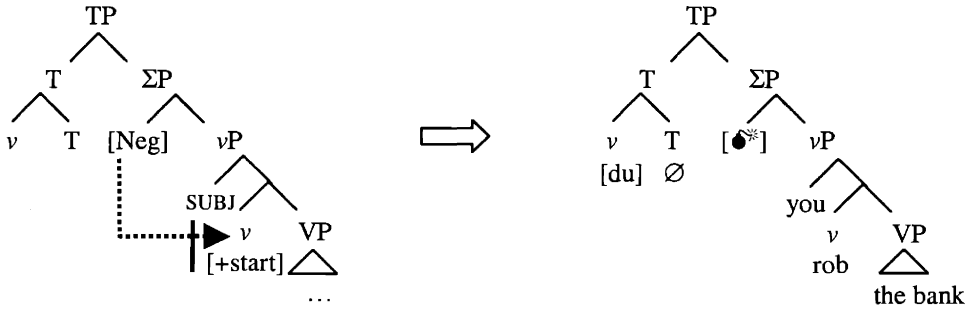
*Although I do like pizza, I do not steak$_i$ [$_{VP}$ ~~like t$_i$~~]



The shifted object intervenes between [Neg] and *v*, resulting in ineffability. The bomb symbol [💣] represents ineffability in the PF component, a situation in which PF operations are derailed and Vocabulary Insertion into the feature bundle/morpheme cannot proceed.

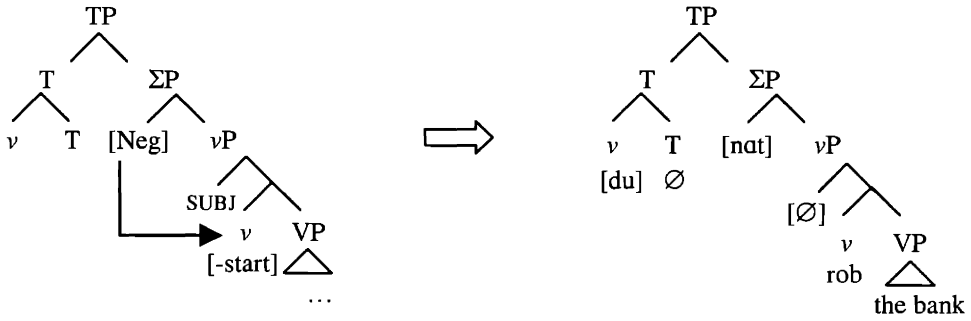
Next, consider the imperative. The imperative subject position is in the specifier of the complement of [Neg], *v*P.

(64)
*Do not you rob the bank!



Now, we must compare (64) with its covert subject counterpart.

(65)
Do not rob the bank!



Why does the pro subject not intervene between [Neg] and *v*, given that it is in the same structural position as *you*? The fact that it is phonologically null is crucial. As long as *pro* is rendered null at the point of Adjacency Assessment by [Neg], it does not intervene. [49]

There seems to be a general principle by which null material does not cause an intervention effect, but can still be visible for the purposes of Adjacency Assessment. The distinction between (non-)blocking and licensing should be considered crucial here.

3.4.2 [Neg] in T is trivially adjacent to a verbal feature

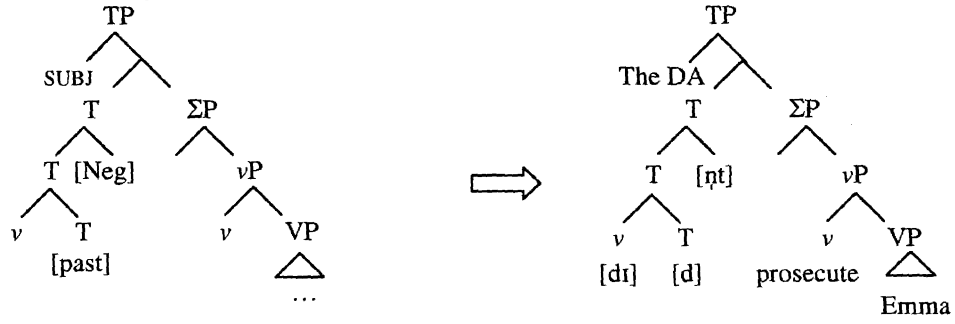
If we consider the structures in which [Neg] has raised to T, we can see why [nt]'s ability to appear is never compromised by the presence of arguments between the base-generated position of [Neg] and *v*. The reason is relatively simple – whenever ΣP is in the structure, there is always a verbal feature in T with which raised [Neg] trivially satisfies its adjacency requirement by virtue of their co-occurrence within the same complex head.

[49] This could mean that *pro* is spelled out as [∅] within the *v*P phase, or, if it is spelled out in same phase as [Neg] because it is at the phase edge, that Vocabulary Insertion proceeds bottom up and *pro* has already been rendered null at the point of insertion into [Neg].

In *do*-support cases, [Neg] is in the same head as *v*. When an auxiliary or copula raises to T, [Neg] is in the same head as v_{AUX}; this is the same head that licenses in situ [Neg]. The only other case is when a modal is involved, but modals can reasonably be argued to contain a verbal feature of some sort that satisfies [Neg] the way $v_{AUX/COP}$ or default *v* does. Modals inflect for tense like main verbs and auxiliaries, so they likely contain some feature in common that satisfies [Neg]'s need for an adjacent verbal element. Crucially, when [Neg] occurs in the same head as a licensing verbal feature, it meets its requirement for adjacency by virtue of locality with a *v* within the complex head in which it appears.

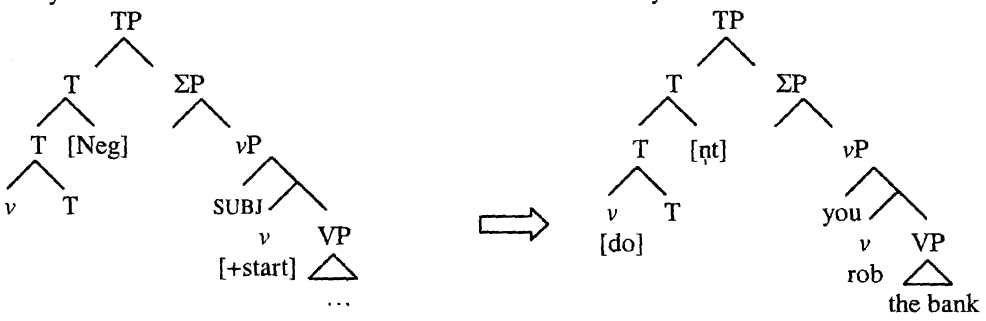
The cases in (56)-(62) do not all require repetition with raised [Neg] - (66) can be taken as representative. [Neg]'s adjacency requirement is met within the head it occurs in.

(66)
The DA didn't prosecute Emma.



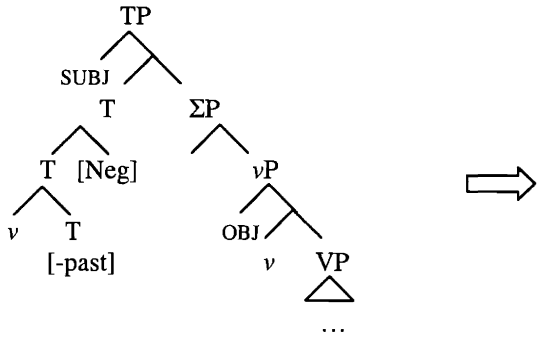
In (67) and (68) we see that in overt subject imperatives and pseudogapping, [Neg] is similarly able to satisfy adjacency in the head in which it occurs. The argument to its right has no effect.

(67)
Don't you rob the bank!

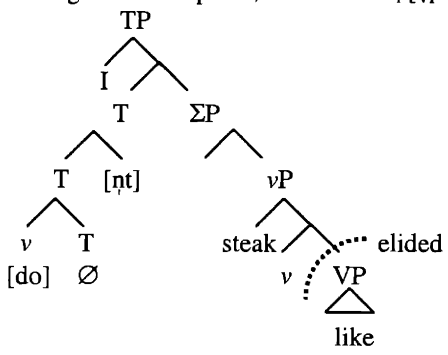


(68)

(Although I do like pizza,) I don't steak$_i$ [$_{VP}$ ~~like t$_i$~~]



Although I do like pizza, I don't steak$_i$ [$_{VP}$ ~~like t$_i$~~]



The contrast between [nt] and [nɑt] is thus explained for overt subject imperatives and pseudogapping with an object remnant– it falls out of how [Neg] meets its adjacency requirement in the position in which it is realized. In both cases, when [Neg] has not raised to T, adjacency is disrupted.[50]

3.4.3 Adjacency Assessment and the nature of (Head) Movement

Note that in the trees in the preceding section, the copy left by raising of the subject from [spec, *v*P] is crucially absent from the PF representations relevant for Vocabulary Insertion. If a subject copy were present, it would disrupt adjacency and prevent Vocabulary Insertion into in situ [Neg], yet no such effect is observed here.[51] On the other hand, the copy left by auxiliary and copula raising is crucially present in the representations above; its presence is required to license in situ [Neg].

We must ask whether it is an accident that the copy left by movement of the subject does not block adjacency while the copy left by raising of the verbal head licenses adjacency, or whether there is some principled distinction between head movement and A-movement that

[50] One might be tempted to claim that [Neg] always raises to T (*cf.* Frampton 2001), with a free choice to spell out the head or tail of the chain as long as adjacency obtains in both places. For overt subject imperatives and pseudogapping, then, only the head of the [Neg] chain could be spelled out. However, there is reason to believe that [Neg] is not always structurally represented in both places. I will show in Chapter 4 that there are cases in which [nt] interacts with other material in T, whereas [nɑt] fails to exert any such effects. I propose that the asymmetry should be treated as a local effect of [Neg] in T that is not present with [nɑt] because [nɑt] realizes in situ [Neg]. If [Neg] always raised, it should have the same effect on material in T no matter where it is spelled out. I reject the hypothesis that [Neg] always raises and can be spelled out in either place as long as adjacency obtains.

[51] There are other cases in which A-traces seem to be absent from the representation. Subject traces also do not disrupt adjacency for tense lowering, as an examination of Bobaljik's analysis reveals, nor do they prevent *wanna*-contraction, for example, which is, in contrast, blocked by a *wh*-trace between "want" and "to".

predicts this difference. A treatment of head movement as PF movement and A-movement as syntactic movement predicts just such a distinction.

Chomsky (1995; subsequent works) has advocated a PF movement approach to head movement on conceptual grounds. Head movement does not exhibit the hallmarks of syntactic raising: it violates the Extension Condition and has no effect on semantic interpretation,[52] in contrast with A-movement, which extends the tree and has scopal reflexes. These conceptual arguments for PF head-movement are bolstered by the empirical evidence for the head/A-Movement distinction in the previous section. Assume that copies created by syntactic movement are deleted as the tree is handed off to the PF branch. This can be seen to follow from economy considerations – deletion of copies results in a reduction of the set of objects that must be interpreted at PF. The copies of auxiliary/copula raising that remain in the trees above cannot be copies at all, then, as true copies should no longer be visible in the PF component. These apparent copies, however, do still seem to occupy a structural position lower than the one in which they are pronounced for the purposes of licensing in situ [Neg]. This paradox can be avoided if the overt position of the auxiliary/copula arises through PF movement, or movement after the syntactic computation, of the terminal node subsequent to Adjacency Assessment. In the cases of the auxiliary/copula movement above, apparent licensing of in situ [Neg] by the copy of the auxiliary/copula, then, is licensing prior to PF-raising; no copies/traces of head movement are required.

What is the character of PF-movement? How does it differ from syntactic movement?[53] The most conservative approach would be to propose that PF movement has essentially the same character ascribed to syntactic head movement, but occurs on the PF branch. That is, it depends on syntactic relationships, but occurs after Spellout, and as such has no reflex in the hierarchical relationships interpreted at LF. The raising is presumably a PF phenomenon by which a head is pronounced in an alternative position to the one in which it was merged. The movement between the merger position and the position of phonological expression would be a realization of a syntactic Agree relationship between the two positions as some sort of (non-extending) late

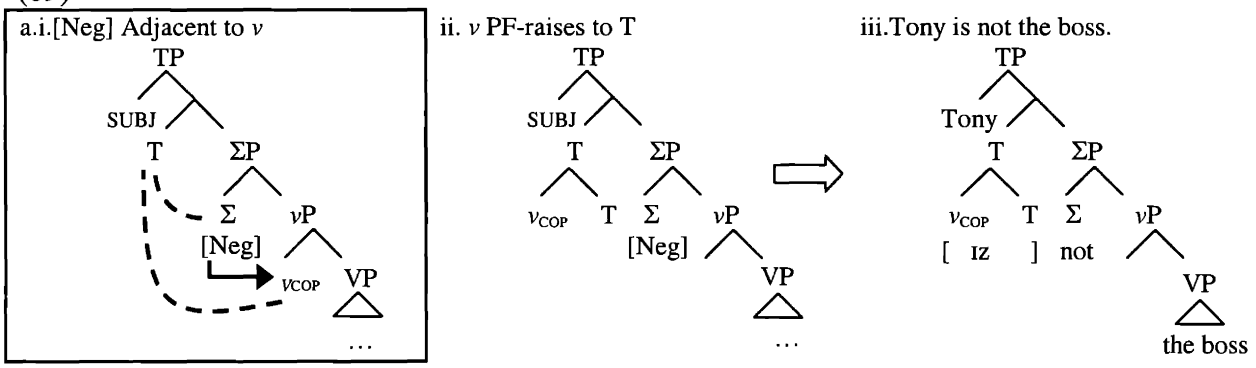
[52] Chomsky (2001a) argues that A-traces must be deleted in the syntax, or else they would cause intervention effects for agreement that they do not actually cause, i.e. effects that are predicted if they are present fail to be seen. Shifted objects don't cause intervention effects for attraction of subjects, for instance. This has to mean, at least, that the features of the copy that would be active in the syntax for attraction are missing.

[53] For other discussion of syntactic vs. PF head movement, consult Boeckx & Stjepanović (2001); Sauerland and Elbourne (2002); Matushansky (2002).

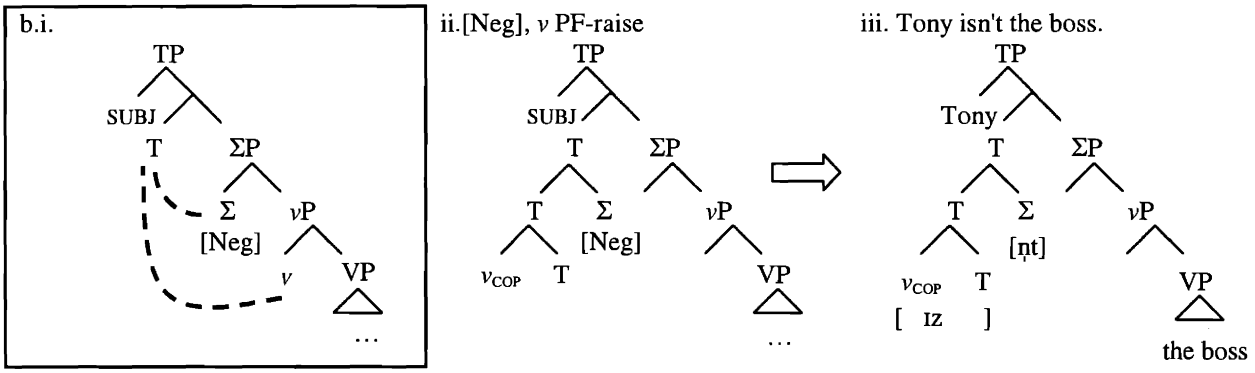
head-adjunction. PF movement, essentially follows up on syntactic Agree relationships by pronouncing the goal in the position of the probe, to adopt Chomsky's (2001) terminology.

A PF head-movement analysis in conjunction with the current treatment of T and Σ proceeds as in (69)a. In the syntax, T Agrees with *v* and [Neg]. The structure in (a.i) is handed off to the Morphological component. [Neg] is licensed by the head of its complement, *v*. In (a.ii), adjunction of *v* to T takes place, prior to Vocabulary Insertion, in (a.iii).

(69)



Alternatively, both *v* and [Neg] could PF raise to T, as in (69)bii, since both Agree with T. In this case, [Neg] meets Adjacency with *v* locally within T, prior to Vocabulary Insertion in (biii). The internal structure of T in (69bii) reflects the surface morpheme order; it is not necessarily the expected structure resulting from syntactic head movement. This could be taken as further suggestive evidence that the copula and negation end up in T through PF raising.



A PF movement approach not only provides an explanation for the difference between invisible A-traces and visible head traces for [Neg] licensing, but it also provides for the plausible assumption that the internal structure of T after PF movement of *v* (and [Neg]) looks the way it does because it is governed by morphophonological, not syntactic, affixation requirements.

If all head movement is to be treated as PF raising, questions arise for the analysis of *do*-support adopted from Embick and Noyer (2001) earlier in this chapter. According to that analysis, *do* is the realization of a default *v* inserted into T in the syntax when T is not merged with *v* (i.e. when ΣP is present) and no *v* occurs in T (i.e. no modal is present, nor has an auxiliary or copula raised to T). PF head-movement conflicts with strict interpretation of Embick & Noyer's approach; if auxiliary movement, for example, does not take place until PF, the system incorrectly predicts *v* insertion in the syntax in a negative declarative, as in (70)a.

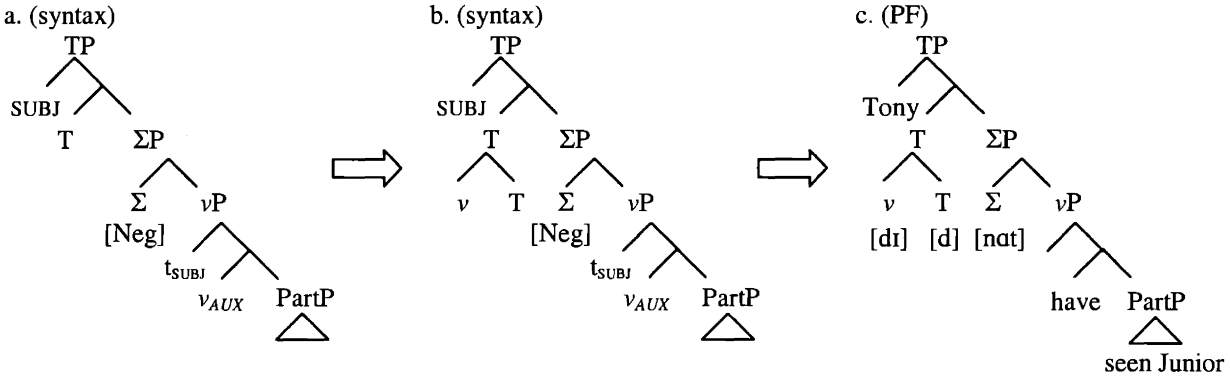
(70)

a. *Tony did not have seen Junior.

b. Tony had not seen Junior.

Without syntactic head movement, the ungrammatical (70)a would be derived as in (71).

(71)



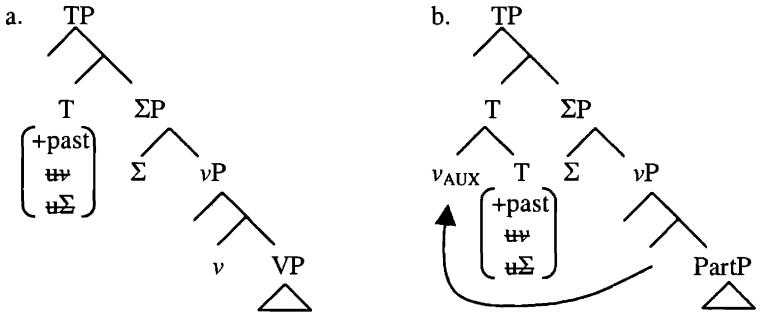
In (a), T is merged with ΣP, leading in (b) to default *v* insertion into T, since v_{AUX} has not raised in the syntax. In (c), *v* in T is realized as support *do* at PF.

Thus, the adopted *do*-support system incorrectly derives an ungrammatical clause if head movement does not take place in the syntax. Assuming, based on the arguments from [Neg] licensing, that head movement nonetheless does take place at PF, how can *do*-support be accurately accounted for?

Do-support is required when, prior to Vocabulary Insertion, T does not contain a modal/copula/auxiliary (i.e. only a main verb is present) and is prevented from Lowering to *v* (i.e. [Neg]/[Aff] is present). This is presumably not simply because the phonological exponents of T cannot be realized on their own; even when the spellout of T is null, *do*-support is required in the contexts described above. T is apparently a dependent element in the Morphology, and not in the syntax in the sense of Embick and Noyer (2001).

A different understanding of what it is that *do* spells out is required. Consider the feature content of T at PF in the two cases below. (72)a represents a case that ultimately involves *do*-support, while (72)b represents a case in which an auxiliary PF raises to T, obviating the need for *do*-support.[54]

(72)



In (72)a-b, the checked uninterpretable features that took part in syntactic Agree relationships are present in T, but marked for deletion. Since PF head movement is hypothesized to instantiate late adjunction based on Agree relationships established in the Syntax, as in (72)b, it stands to reason that these features are still visible at PF to mark the target position of PF raising.

Consider the possible spellouts of (72)a-b in (73)a-b respectively.

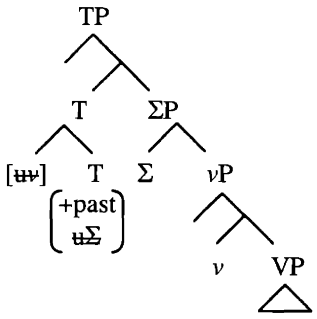
(73)

a. Tony did not see Junior.
b. Tony has not seen Junior.

How does T get spelled out on a form of *do* in (73)a? The solution I pursue here is to treat *do* as the spellout of the checked, but as yet undeleted, *v* feature in T. Since T has a morphological requirement for adjacency to *v*, I propose that a process of fission dissociates [~~uv~~] from the feature bundle that comprises T, resulting in the configuration in (74), in which T is now adjacent to a *v* feature.

[54] Some morphological property of auxiliaries and copulas, and not a phonological property of the Vocabulary Items themselves, is responsible for PF raising. Main verb *have*, for instance, is phonologically equivalent to auxiliary *have*, but the main verb does not raise because it lacks the morphological specification for raising.

(74)



At Vocabulary Insertion, the feature [u*v*], at this point an independent terminal node, is spelled out as a form of *do*. The fission operation is a last resort in this circumstance to ensure that T meets its adjacency requirement; the empty verb *do* is simply the phonological exponent of the dissociated *v* feature.

Further evidence that [u*v*] can be realized phonologically in order to license T comes from VP ellipsis (VPE).

(75)

a. Carmela watched the movie, and Phil did too.

b. Carmela watched the movie and Phil T_{-ed} ~~watch the movie~~ too.

Even though there is no adjacency disruption from an intervening [Neg]/[Aff] head, Lowering of T to *v* fails due to deletion of *v*P.[55] Again, the only option for licensing of T is to spell out [u*v*] independently as *do*.

Embick and Noyer's approach seems to fail to predict *do*-support in VPE. T is adjacent to *v* in the syntax, so default *v* insertion is not triggered, yet *do*-support is obligatory. It is not clear how *do* is realized on their approach.[56] However, on the above proposal, *do*-support results from the inability of T to Lower to the elided/deleted *v*; [u*v*] must be realized as support *do* in such a case, just as in (74).

Embick and Noyer's main argument that default *v* must be inserted in the syntax is predicated on a case of ineffability in which both Lowering and *do*-support both fail to yield a grammatical output.

---

[55] Alternatively, adjacency between T and *v* may fail if ellipsis instantiates deletion of *v*P in the morphological component. Such deletion would have to be ordered after Adjacency Assessment of [Neg], but before it for T according to what has been said. I ultimately adopt a treatment in terms of *v*P deletion based on considerations yet to be mentioned.

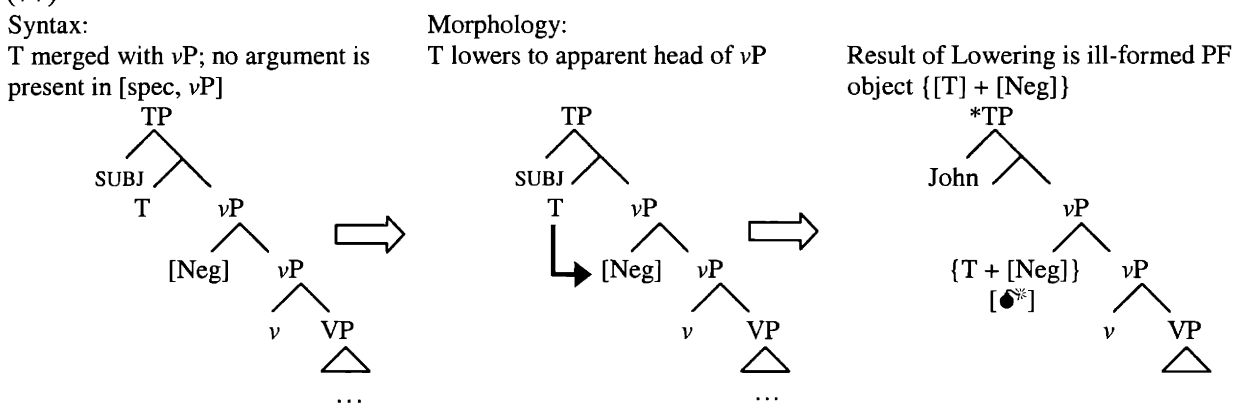
[56] Unless, of course, the *v*P was deleted in the Syntactic component rather than the Morphological component, which creates a problem for post-syntactic licensing of [Neg] by *v*.

(76)

a. John can always not agree.
b. *John always not agreed.
c. *John did always not agree. (≠ John díd always not agree)

In (76)a, Tense is realized on the modal in T. In (76)b-c, when there is no modal, neither Tense Lowering nor *do*-support are viable options. Embick and Noyer attribute the ineffability to a consequence of the structural position of constituent negation.

(77)



In the syntactic component, there is no reason to insert default *v* into T because T is merged with *v*P; constituent negation is treated as material adjoined to *v*P. However, when T Lowers, the targeted head turns out to be [Neg], not *v*; the illicit PF object {[T] + [Neg]}, which has no realization, is formed. This problem does not arise until PF, at which point it is too late in the derivation to insert default *v*, as such insertion happens in the Syntactic component for Embick and Noyer.

This PF ill-formedness approach can still be adopted even with the above refinement of what it is *do* realizes. Since it appears that Tense can Lower to the head of its complement without obstruction by an argument in (77), it must do so; the fission operation that dissociates [~~uv~~] from the feature bundle of T is, strictly, a last resort when T's adjacency requirement is not met, and not when Vocabulary Insertion fails. Since the resulting {[T] + [Neg]} PF object is ill-formed – as Embick and Noyer point out – the result is ineffable.

3.4.4 The HMC and PF head-raising

Head movement of an auxiliary or copula over/through negation has long been considered a problem given that the raising is non-local; it constitutes an apparent violation of the Head Movement Constraint (Travis 1984).

(78)

a. The FBI has not arrested Tony.

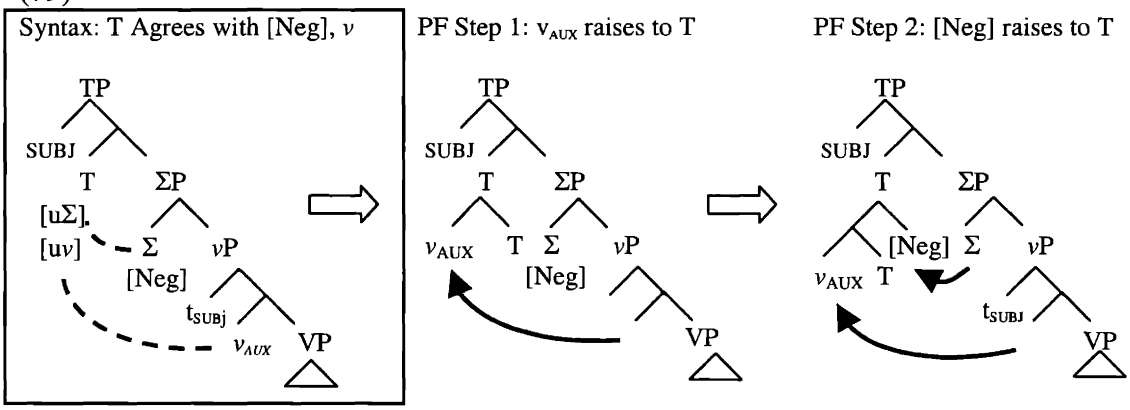
b. The FBI hasn't arrested Tony.

While (78)b could conceivably represent auxiliary movement into Σ followed by movement of the complex {Aux + [Neg]} head into T, (78)a is less straightforward on an approach in which head movement constitutes strictly local head-to-head syntactic raising. This is because the auxiliary either skips over [Neg], or moves into Σ and then excorporates and moves to T.

On a PF head movement approach, neither (78)a nor (78)b are a challenge to the theory as long as T and $v_{AUX/COP}$ enter into an Agree relationship in the syntax. Of course, [Neg], as a head, must also Agree with T to raise to T at PF. As long as both Agree relations are established in the syntax, head movement of auxiliaries and negation to T is possible.

(79)b-c illustrate the PF movement possibilities based on the Agree relations in (79)a.[57]

(79)



As long as Agree between T and $v_{AUX/COP}$ violates no syntactic principle, the PF head movement approach provides a compelling solution to problem of apparent HMC violations: head movement is not subject to syntactic head-to-head locality or intervention effects at all since it is movement directly to the head with which Agree was established in the Syntax.

3.5 PF affixes without affixation

The analysis thus far can be further refined in to distill the properties that hold of [Neg] and T and to clarify the structural account of *do*-support proposed here.

[57] Note that PF raising of the auxiliary is obligatory, and presumably ultimately owes to some independent morphological property of auxiliaries (cf. Roberts 1998), while PF movement of [Neg] is optional.

The morphemes [Neg] and finite T should be thought of as syntactic terminal nodes composed of a bundle of formal features. In the PF component, these morphemes have the property that they are Affixes. The defining feature of an Affix, on this view, is that it is a dependent element in the sense that it has a requirement for Structural Locality – what I have been calling Adjacency – with another element; structural locality is met at PF between a head and the head of its complement, as long as no argument occupies the specifier of the complement. Affixes can be subdivided into two categories on the basis of whether or not they undergo merger with the element with which they must establish Adjacency; Stable Affixes, such as [Neg], need not undergo merger, while Unstable Affixes, such as T, must undergo merger. The reflex of T's status as an Unstable Affix is that it either Lowers to or attracts a *v* with which a syntactic Agree relationship has been established. It is not clear at this point how or whether the phonological exponent that realizes an Unstable Affix like T interacts with this merger requirement. Though it seems like no coincidence that the realizations of tense are phonetically weak, a model with Late Insertion of Vocabulary Items such as I have adopted logically precludes the ultimate phonetic characteristics of a morpheme from affecting its behavior prior to insertion.

Failure to meet Structural Locality in the configuration that is handed off to PF as the Output of the narrow syntax results in a PF interface crash, unless a last resort operation is available to create a configuration in which Structural Locality obtains. *Do*-support qua dissociation of T's [~~uv~~] feature is precisely such a last resort operation; it is not available for [Neg] simply because [Neg] does not contain a [u*v*] feature. To be clear, there is no deep explanation for the fact that ineffability results from a disruption of Structural Locality between [Neg] and the head of its complement while *do*-support is available for similar disruptions for T. The operation that results in *do*-support, fission of the feature with which the affixal morpheme requires adjacency from its own feature bundle, is in principle available whenever an Affix contains a candidate dissociable feature.

3.5.1 Unstable T

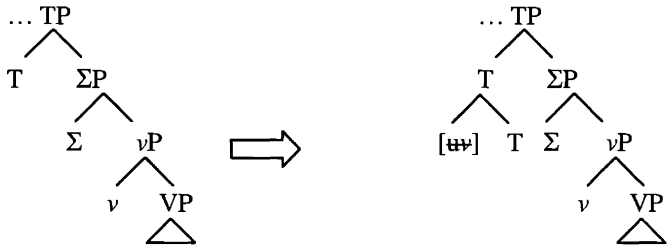
The cases of *do*-support discussed in previous sections are amenable to an explanation in terms of a disruption of Structural Locality alone, given the correct perspective.

Do-support in negative and emphatic declaratives arises when Structural Locality between T and *v* fails due to the presence of ΣP; the head of T's complement is Σ, not *v*.

(80)

a. Tony does not eat pizza.

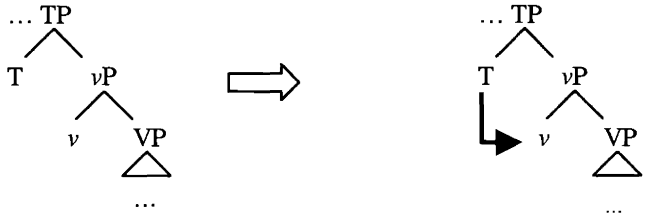
b. Tony dóes eat pizza.



Even if Σ were to raise to T, T's structural relationship with *v* would not change, as Structural Locality holds not with the linearly adjacent head, but with the head of the complement (i.e. T would not be adjacent to *v* if the head of ΣP raised).

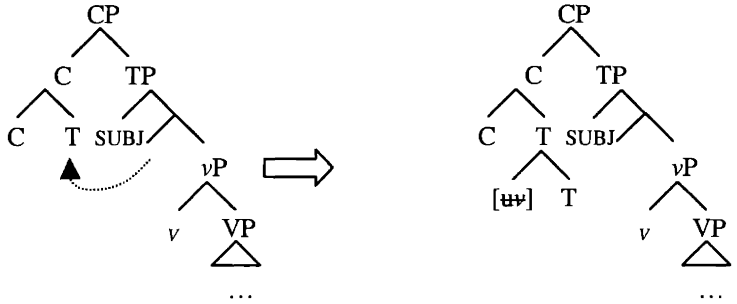
In the absence of ΣP, T meets Structural Locality with *v*, the head of its complement; meeting this structural morphological requirement is a precursor to lowering of T to *v*.

(81) Tony eats steak.



In the case of polar interrogatives, PF raising of T to C removes T from a local relationship with *v*; prior to Vocabulary Insertion, dissociation of [u] applies.[58]

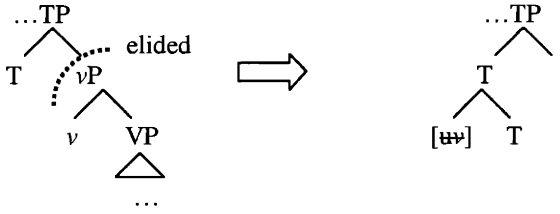
(82) Does Tony eat pizza?



Do-support in VP ellipsis suggests an approach in which ellipsis involves deletion of structure in the PF component, as in (83)

[58] The asymmetry between subject and non-subject *wh*-questions with respect to *do*-support requires an account in which T does not PF raise to C in matrix *wh*-subject questions. Bobaljik (1995) allows merger of the tense affix from its position in C with the verb since the raised *wh*-subject in [spec, CP] does not intervene between the two, but this possibility is inconsistent with T's Structural Locality requirement.

(83) (Chris eats pizza and Tony) does too.



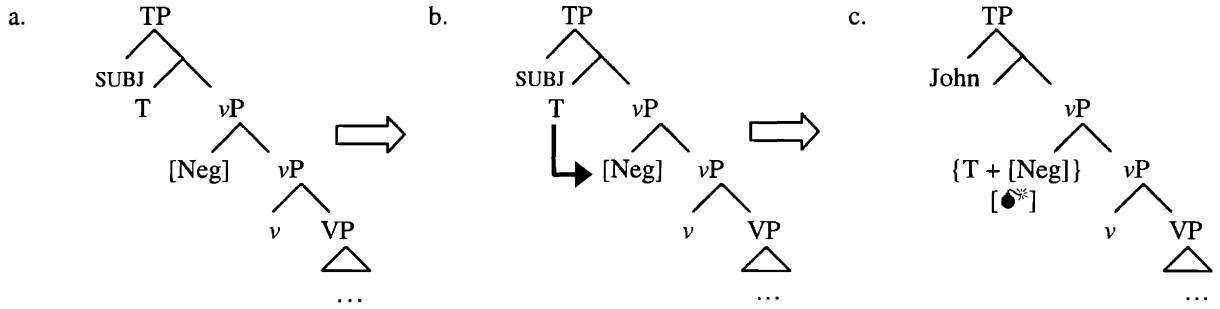
Deletion of the *v*P in the PF component results in a configuration in which Structural Locality with *v* is not met by T. The value of this approach to ellipsis, as opposed to a conceivable alternative in which VP ellipsis is treated as insertion of null Vocabulary items into the terminals *v*P, is especially obvious when it is contrasted with a case in which *do*-support is ineffable. Recall the discussion of the facts in (76), repeated here in (84).

(84)

a. John can always not agree.
b. *John always not agreed.
c. *John did always not agree. (≠ John díd always not agree)

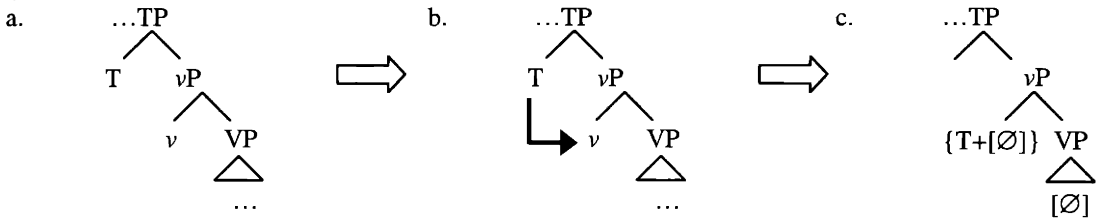
Both tense Lowering and *do*-support fail in (84)b-c. The explanation adopted previously still applies: since no argument occupies the specifier of *v*P, T appears to meet Structural Locality with the head of its *v*P complement such that the *do*-support operation is inapplicable. However, the head targeted by lowering of T is actually (constituent) [Neg], not *v*; the resulting object {T + [Neg]} is an ill-formed PF object, thus ineffable.

(85)



Consider now the alternative in which VP ellipsis is not structural deletion of *v*P, but null spellout of the content of *v*P, as in (86).

(86)



In such a case, Structural Locality between T and *v* obtains, making way for Lowering of the Unstable T Affix onto the verb. However, if the verb is realized as [∅], the resulting PF object should be ill-formed, as there is no phonological material for the tense suffix to be realized on. Nonetheless, the resulting ill-formed PF object does not cause ineffability; *do*-support is indeed available. If *do*-support is limited to cases of failure of Structural Locality, VP ellipsis as null spellout is not a viable alternative to ellipsis as structural deletion of *v*P in the PF component. The picture in (86) is an inaccurate representation given that *do*-support, not ineffability, results from VP ellipsis.

Treating VP ellipsis as deletion of the *v*P at PF has important implications for the treatment of *do*-support in pseudogapping. Pseudogapping, according to the schema employed by Lasnik, involves a combination of object shift and VP ellipsis. I implemented the spirit of that analysis in terms of object shift to [spec, *v*P] earlier, with ellipsis targeting the VP complement of *v*. The picture in (83), however, holds the target of ellipsis to be *v*P as a means of removing the Structural Locality relationship between T and *v* created in the Syntax. If the object shifts to [spec, *v*P] in pseudogapping, it is contrary to reasonable expectations that the object alone should be pronounced to the exclusion of the remainder of the *v*P in pseudogapping. The ellipsis facts require the remnant to occupy a position outside of the *v*P in order for it to be excluded from the deleted constituent. Consider the following example.

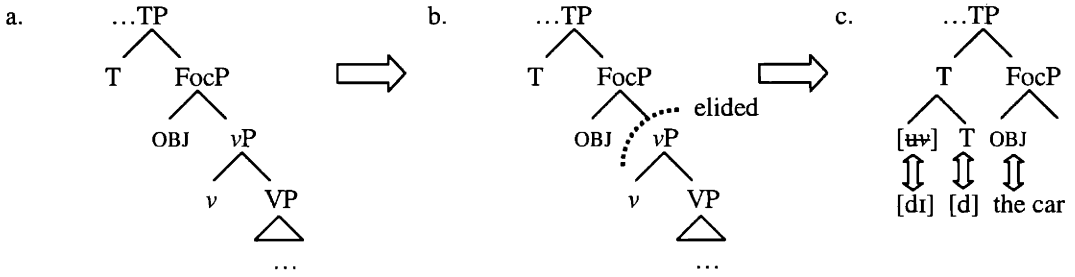
(87)

a. Tony drove the truck and Junior did the car.

The object remnant *the car* ostensibly occupies a position outside of *v*P since it does not disappear under *v*P deletion. Given the contrastive component of the remnant's interpretation, that position can be considered to be a focus position. Along the lines of the arguments in Chapter 2, I assume that contrastive interpretation is a positional phenomenon. The tree in (88)a

represents the relevant subpart of the output of the Syntax for the pseudogapping construction in (87), with the object raised to a focus position.[59]

(88) (Tony drove the truck and Junior) did the car.



In (88)c, with the material targeted by ellipsis in (88)b deleted, *do*-support takes place. The shifted argument, then, does not itself cause *do*-support by disrupting Structural Locality; rather, the presence of the FocP in which it is located does so in the same way that the presence of ΣP does in (80).

Two beneficial consequences emerge from treating the position of the remnant as a focus position.[60] First, since movement is to a focus position and is not actually object shift in the traditional sense of raising to [spec, *v*P] (or, equally, [spec, Agr_O]), a potentially problematic aspect of Lasnik's analysis is overcome. Some argument remnants appear, in pseudogapping, to have shifted across a clause boundary; such movement defies the otherwise local nature of dislocation of shifted objects (abstracting away from restructuring environments).

(89) Tony tried to drive the truck, and Junior did the car$_i$ [$_{vP}$ ~~try~~ [~~to drive~~ (the car$_i$)].

Movement to a focus position, however, may not be similarly constrained.

Second, characterizing the raised position of the remnant as a focus position rather than an argument position sheds some light on the otherwise mysterious ability of adjunct remnants to shift out of the *v*P.

(90) Tony cried after the party, and Junior did after the funeral$_i$ [$_{vP}$ ~~cry~~ (after the funeral$_i$)]

There is a contrastive component of the interpretation of the shifted adjunct similar to that of the shifted object in pseudogapping. The [spec, FocP] position is seemingly available for shifted

[59] For arguments that this focus position is an A-position, see Baltin (2000).

[60] A potential complication exists as well. A well-noted contrast in grammaticality between a pseudogapping clause and a clause with the same structure that does not involve ellipsis remains to be explained.

i. Tony drove the truck, and Junior did the car.

ii. *Tony drove the truck, and Junior did the car drive.

I leave the issue open as to why object raising to a focus position only proceeds grammatically in tandem with deletion of *v*P.

adjuncts in pseudogapping as well. Furthermore, if [spec, *v*P] were the position to which the remnant raised in pseudogapping, then *do*-support would be falsely predicted not to occur with an adjunct remnant, since an intervening adjunct should not disrupt Structural Locality between T and *v*. The fact that *do*-support occurs with both adjuncts and arguments here is an argument in favor of remnant licensing in an independent projection that disrupts Structural Locality between T and *v*.

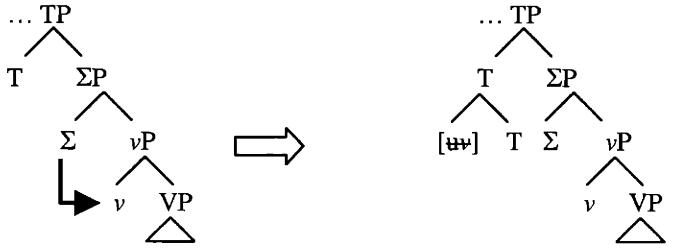
The English cases discussed here have not revealed an effect of the argument/adjunct asymmetry on Structural Locality between T and *v* since they involve either deletion of *v*P or the presence of an intervening ΣP or FocP between T and *v*. True object shift to [spec, *v*P] is the arena in which an effect of argument intervention on Structural Locality for T is predicted to hold; I assume that Germanic object shift, as discussed earlier in the chapter, does, as Bobaljik (1995) claims, represent argument intervention between T and *v*.[61]

3.5.2 Stable [Neg]

The stable affix [Neg] differs minimally from T. It too requires Structural Locality with the head of its complement, but the requirement must be loosened in that the identity of that head is not always restricted to *v*. In the case of pseudogapping, in particular, it seems that adjacency with the head of FocP satisfies in situ [Neg] as long as [spec, FocP] contains an adjunct and not an argument.

Let us begin with the simpler case of a negative declarative, in which in situ [Neg] meets Structural Locality with *v*, as in (91).

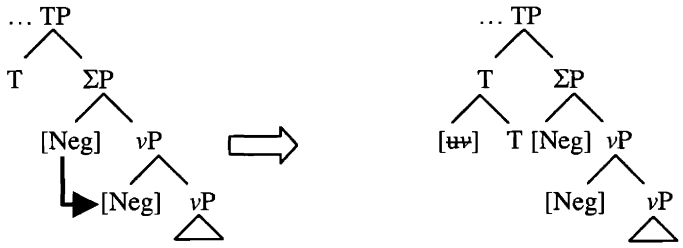
(91) Tony does not eat pizza.



In (92) we see that, contrary to the resulting ineffability when constituent negation occurs between T and *v* in (85), constituent negation may occur between [Neg] and *v*.

[61] Bobaljik's OS analysis is not uncontroversial; the recent literature (Holmberg 1999; Bobaljik 2002) should be consulted for differing perspectives on the nature of Germanic OS.

(92)



Just as T in (85) established Structural Locality with constituent negation [Neg] adjoined to *v*P, so does sentential [Neg] in (92). *Do*-support occurs, as expected, as a result of the presence of ΣP. Unlike T, [Neg] is stable and does not lower to the head with which it establishes adjacency, so the presence of constituent negation cannot, and does not, lead to ineffability, as the examples in (93) illustrate.

(93)

a. Do not not pay your bills on time!
b. Christopher does not not like steak.

The presence of constituent [Neg] in the structure with in situ sentential [Neg] does not lead to PF ineffability, since, as a Stable Affix, [Neg] does not lower. Thus, an illicit PF object of the type that results from lowering of T to constituent [Neg] is never created in a structure like (92).

In situ sentential [Neg] in pseudogapping, according to the discussion in the previous section, has FocP for a complement. If [Neg]'s requirement were strictly for adjacency with *v*, Structural Locality could never be met; this predicts, obviously incorrectly, the absence of [nɑt] in pseudogapping.

(94)

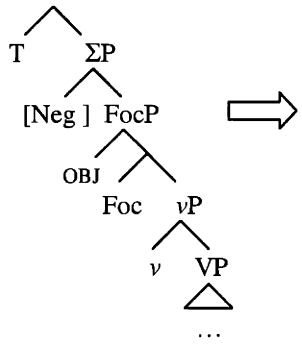
a. Although Tony likes steak, he doesn't pizza.
b. *Although Tony likes steak, he does not pizza.
c. Although Tony drank champagne after the party, he didn't after the funeral.
d. Although Tony drank champagne after the party, he did not after the funeral.

Clearly, [nɑt] has a limited distribution in pseudogapping, but (94)d shows that in situ [Neg] is licensed above the FocP that hosts the raised adjunct remnant. Only in (94)b is in situ [Neg] ruled out, due to the presence the raised object argument in [spec, FocP]. This is an effect of the argument/adjunct asymmetry for Structural Locality. [Neg] is only licensed by the head of its

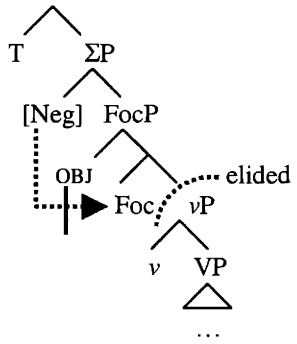
complement in pseudogapping contexts when the element that has raised to [spec, FocP] is an adjunct, as in (96)b.[62]

(95) *Although Tony does like steak, he does not pizza.

a. …TP

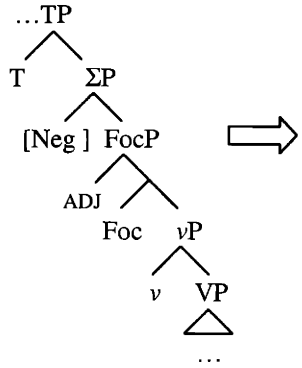


b. …*TP

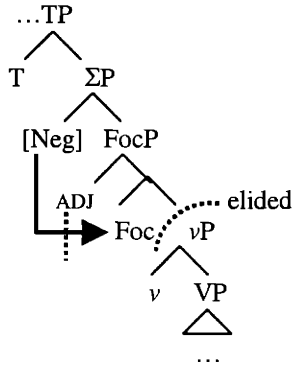


(96) Although Tony drank champagne after the wedding, he did not after the funeral.

a. …TP



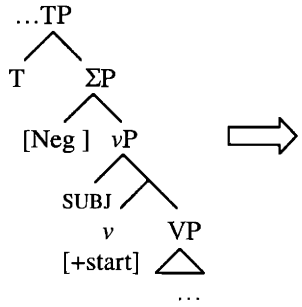
b. …TP



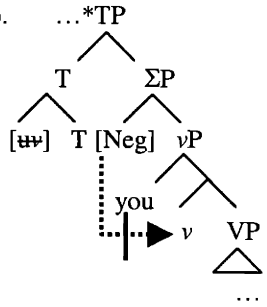
The argument/adjunct asymmetry for satisfaction of [Neg]'s Structural Locality requirement holds in the imperative in an identical configuration, save for the identity of the complement of in situ [Neg].

(97) *Do not you rob a bank!

a. …TP



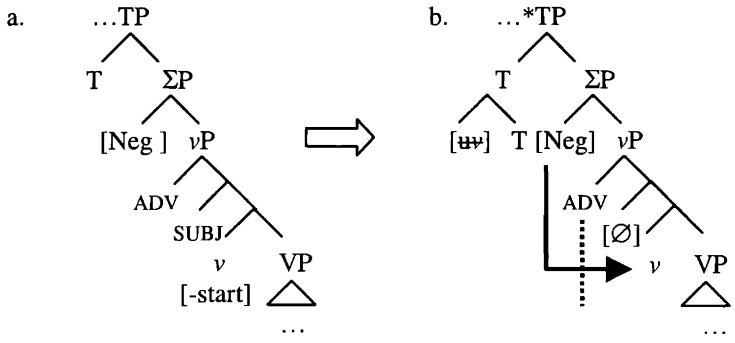
b. …*TP



However, an adverb causes no such intervention, as in (98).

[62] Raised [Neg], is, of course, licensed regardless of the identity of the phrase in [spec, FocP].

(98)



The set of cases involving ineffability with in situ [Neg] result from disruption of Structural Locality due to argument intervention. [Neg] does not in fact appear to require adjacency with *v* in particular, as the pseudogapping case makes clear; this relative freedom in terms of Structural Locality likely differs from T's strict requirement for Structural Locality with *v* because the tense affix may only be realized on *v*. Structural Locality, in its essence, should be reducible to a requirement for adjacency with the head of a complement.

3.6 Conclusions

The analysis developed here allows for a unified treatment of sentential negation as single syntactic head. The distribution of its two phonological exponents is dependent upon the position the head occupies for the purposes of Vocabulary Insertion in the PF component. The approach contrasts with that of Bresnan in that there is no need for global comparisons of possible derivations containing negation, only an evaluation in the Morphological component based on Structural Locality and on the insertion contexts for the two forms of negation for a given input syntactic structure. The structural configurations that Morphology operates on are dependent on Agree relationships created in the Syntactic component; one such set of relationships provides a solution to the problem of long-distance auxiliary raising for the HMC. Furthermore, the parallel behavior of [Neg] and Tense with respect to subject intervention provided a prediction for the behavior of [Neg] with respect to argument intervention more generally, a prediction that was borne out by the data from pseudogapping constructions that show a [nɑt]/[n̩t] distinction with object remnants.

The approach that I have taken relies heavily on a strict distinction between the narrow syntactic computational system and the PF component. The syntax is free to generate the structures that can be formed according to syntax-specific principles. The Morphology must

work with the output of the syntax to provide phonological exponents for the terminal nodes it is presented with. Vocabulary Insertion is constrained according the specific properties and requirements of individual terminal nodes, such as [Neg]'s adjacency requirement; when Structural Locality is not met by the [Neg] morpheme, PF operations are derailed and the structure is ultimately ineffable due to prevention of Vocabulary Insertion into [Neg]. These properties and requirements induce certain restrictions that may be reminiscent of traditional clitic/affix distinctions, but the theory does not need to recognize these distinctions as primitive, as Embick and Noyer (2001) point out. To the extent that [Neg]'s behavior mirrors that of the tense affix, the conclusion here does not differ significantly from Zwicky and Pullum's, although the analysis does. The labels clitic and affix, as Embick and Noyer point out, have traditionally been extended to dependent elements that come to be associated with their hosts in different ways, but the distinction is one without status on the assumptions adopted here.

Although the present analysis relies on a conceptual distinction between operations in the syntax and operations in the Morphology, the treatment of [nɑt] brings to the fore that these modules can be seen to share an interesting technical property, the separability of a checking or Agree procedure from a movement procedure. Just as Agree and Move (i.e. Internal Merge) have been posited as separate operations in the syntax, I have posited that in the PF component, , assessment of adjacency in terms of Structural Locality proceeds independently of Lowering (or morphological merger).[63] To the extent that these operations mirror each other in the syntax and the morphology, they appear to be properties of the language faculty in general, since they occur across modules.

Appendix: Directions for further inquiry

Negation in English infinitivals

An issue that remains for the approach to negation that I have proposed is the position and form of negation in infinitival clauses to consider: [nɑt] occurs both before and after T (*to*) in infinitival clauses, while [n̩t] is disallowed altogether.

[63] Both tense and [Neg] require adjacency, but only tense undergoes morphological merger. This is presumably due to a property of the tense affix itself that requires morphophonological hosting.

(99)

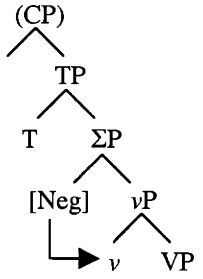
a. Flap begged Emma not to rob banks anymore.
b. Flap begged Emma to not rob banks anymore.
c. *Flap begged Emma ton't rob banks anymore.
d. *Flap begged Emman't to rob banks anymore.

The restriction against [n̩t] suggests that Neg raising to T does not occur in infinitival clauses. Perhaps nonfinite T does not carry an [uΣ] feature, and consequently does not Agree with [Neg], preventing PF raising of [Neg] to T.

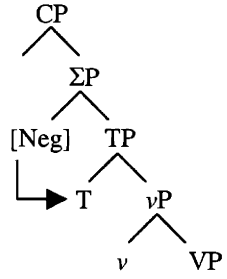
As pure speculation, consider that the two available positions of negation relative to *to* reveal the lack of a selectional relationship between nonfinite T and Neg. If no selectional requirement existed between nonfinite T and Neg, then it should be possible in principle for ΣP to merge either below or above TP. It is possible that [Neg] in either the position above TP or below it is adjacent to a relevant licensing head, and thus can be spelled out as [nɑt]. [Neg] below TP is adjacent to *v*P, the familiar case. [Neg] above TP is adjacent to T.

(100)

a) Flap begged Emma to not rob banks



b) Flap begged Emma not to rob banks



However, there is little reason to posit that non-finite T can license [Neg] in (100)b, or be invisible such that the next head down, *v*P, counts as adjacent to [Neg].

An explanation for the availability of two possible positions for negation relative to nonfinite T is not easily found within the analysis that I have laid out, but this issue is common to most treatments. I will simply acknowledge that the analysis here gets us no closer to explaining the facts about negation in infinitivals if we assume that [nɑt] in infinitives represents the head of ΣP. However, if we question the assumption that [nɑt] represents sentential negation in infinitivals, an alternative approach to the facts in (99) emerges.

Note that there is a subtle meaning difference between (100)a and (100)b that may be important here, but that both are actually consistent with a constituent negation interpretation. It

could be, then, that neither [Neg] heads an independent ΣP in (100). Consider the similar pair in (101).

(101)
a. I wanted to not leave.
b. I wanted not to leave.

(101)a has a meaning something like 'I wanted to stay, rather than leave', while (101)b has a meaning something like 'What it is I wanted was not to leave'. This difference could simply reflect the different positions to which constituent negation can adjoin – to *v*P in (101)a and to TP in (101)b. As constituent negation, [Neg] can only be spelled out by the elsewhere Vocabulary Item [nɑt], which explains the absence of [n̩t] in infinitival clauses.

Chapter 4: Interface Consequences

Overview

The previous chapter argued for an understanding of English sentential negation in which there is a single [Neg] head with two distinct spellout forms. The allomorph for the [Neg] head in its raised position in T is [n̩t], and the allomorph for in situ [Neg] is [nɑt]. The importance of this analysis for the imperative was to provide insight into the unavailability of the word order **do (not) you* in the imperative. An argument-sensitive morphological adjacency requirement of the Σ heads [Neg] and [Aff] was proposed as an explanation. Some direct consequences of the analysis were discussed in Chapter 3, in particular the distribution of the forms of negation in interrogatives, and the conditions on the grammaticality of [nɑt] versus [n̩t] in pseudogapping. This chapter explores two additional consequences of the analysis of the distribution of the sentential negation allomorphs. The first has to do with an interaction between raised negation and the spellout of other heads within T at PF. The second has to do with an interaction between the spellout form of negation and the interpretive possibilities for negation at LF.

The allomorphy analysis in the previous chapter crucially focused on how the spellout of [Neg] depends on locality with *v* such that in situ [Neg] is sometimes prevented from being realized due to the presence of an argument between [Neg] and *v*. The effect was argued to result from ineffability at PF; Vocabulary Item into in situ [Neg] cannot proceed when [Neg]'s adjacency requirement has not been met. Insertion of the Vocabulary Item [n̩t] into raised [Neg] always proceeds unproblematically because adjacency is met with a *v* that has raised to or been inserted into T. For all intents and purposes, the presence of a *v* within T counts as local for the purposes of adjacency assessment by raised [Neg]. The analysis thus makes way for other locality interactions between the heads in T. Basically, heads in a local relationship can exert particular effects on one another for Vocabulary Insertion. When [Neg] raises to T, it is in a local relation with other heads that occupy T, including the auxiliaries, modals, and *do*, and as such can effect the spellout of those heads. Indeed, the literature discusses a set of effects of [n̩t] on the phonological forms of auxiliaries, modals and *do*. The first section of this chapter deals with PF effects of raised negation on vocabulary insertion into the other T elements.

The second section of this chapter deals with LF effects of the spellout of negation predicted by the proposed mechanism by which [Neg] raises to T. Raising of [Neg] to T is supposed to reflect the establishment of a relationship between [uΣ] on T and the head of ΣP that is then followed by PF movement of [Neg] to T. The cases considered in the previous chapter were limited to movement between tautoclausal [Neg] and T. Strictly speaking, however, the system should allow for attraction of [Neg] from a lower clause to matrix T when there is no matrix ΣP.[64] This predicts that there should be a case in which negation is spelled out in the matrix clause but interpreted in the subordinate clause it originated in. Just such a case exists – first proposed in Fillmore (1963), it has variously been labeled Neg-raising, Neg-lowering, and Negative Transportation in the literature (*cf.* Horn 1975, Horn 1989, Lakoff 1969 among others). The prediction is more specific, though, given the analysis of sentential negation allomorphy in Chapter 3. If Neg-raising from the lower clause proceeds directly to matrix T, it can only be spelled out as [n̩t], as for any realization of [Neg] within T. Put another way, the interpretation of matrix negation spelled out as [nɑt] is obligatorily clausebound, given that it necessarily reflects spellout of the in situ head of ΣP and therefore signifies a matrix ΣP. On the other hand, matrix negation spelled out as [n̩t] can, with those predicates that permit Neg-raising, optionally be interpreted either with respect to the matrix or subordinate clause, given that it can reflect [Neg] that raised to T either from a matrix or subordinate ΣP. The literature on Neg-raising has almost exclusively used [n̩t] in examples of Neg-raising; there was little reason to probe for an asymmetry between [n̩t] and [nɑt] in this domain. I take data in which a matrix [nɑt] is meant to represent Neg-raising to be untrustworthy for reasons to be explained below. As a result, to the best of my knowledge, the contrast between [nɑt] and [n̩t] for Neg-raising has not previously been noticed. The results of Chapter 3 provide for the very strong prediction about the unavailability of a Neg-raising reading with matrix [nɑt]. The asymmetry between the two sentential negation allomorphs for the LF interpretive possibilities in Neg-raising provides evidence that the prediction is borne out.

[64] That raising must be from the head of the highest ΣP when both the matrix and subordinate clause contain ΣP is presumably a relativized minimality effect.

4.1 PF Interactions

4.1.1 Contracted Negation

Zwicky and Pullum (1983)[65] point out that reduced auxiliaries/copulas/modals and [n̩t] may not co-occur, as in (1), and that *do* and certain modals exhibit phonological idiosyncrasy when combined with [n̩t], as in (2)-(3). For other modals, there is simply no available form with [n̩t] in some dialects, as in (4).[66]

(1)
a. I've seen The Godfather.
b. I haven't seen The Godfather.
c. *I'ven't seen The Godfather.
d. I'd seen The Godfather.
e. I hadn't seen The Godfather.
f. *I'dn't seen The Godfather.
g. Tommy has seen The Godfather.
h. Tommy hasn't seen The Godfather.
i. *Tommy'sn't seen The Godfather.

(2)
a. I do enjoy watching The Godfather. [du]
b. I don't enjoy watching The Godfather. [downt]/*[duwnt]

(3)
a. Tommy will see The Godfather.
b. Tommy won't/*willn't see The Godfather.
c. Tommy can see The Godfather.
d. Tommy can't/*cann't see The Godfather.
e. Tommy shall see The Godfather.
f. *Tommy shan't/*shalln't see The Godfather.

(4)
a. Tommy may see The Godfather.
b. *Tommy mayn't see The Godfather.

Z&P attribute the facts in (1) to a property of [n̩t] itself. They treat [n̩t] as an inflectional affix, and claim that, as such, it cannot attach to a "simple clitic" (one derived by reduction from a full form), here [v], [d] and [z] from the auxiliaries *have*, *had*, and *has*. In their model, inflectional

[65] Henceforth Z&P.
[66] The lone example given by Z&P involves the reduced form of the modal *would*, [d].
i. *I'dn't be doing this unless I had to.
The point is the same for the reduced auxiliaries, which I focus on in this chapter.

affixes attach lexically to their host words, while clitics attach by a post-syntactic process. The facts in (2)-(4) are also treated as consequences of the status of [n̩t] as an affix – the claim is that phonological idiosyncrasy and accidental gaps are among the characteristics that distinguish affixation from cliticization, since affixation takes place in the lexicon.[67]

Since they claim no unified structural source for sentential negation, it is clear that the framework within which Z&P were working is more similar to that of Bresnan (2001) than the Distributed Morphology-style one subscribed to in Chapter 3. For Z&P, and for Bresnan, distributing the semantics of sentential negation across heads and inflectional affixes is not problematic, but represents a view of the grammar in which a particular unit of meaning can have multiple grammatical representations. However, in the theoretical framework adopted in the previous chapter, a unified analysis of negation was considered to be a desideratum for any analysis of the [n̩t]/[nɑt] distinction; DM supports an approach in which the two spellouts of negation are merely formal variants of a single head.

There are reasons beyond framework preferences to look for an alternative to the Z&P claim that the behavior of [n̩t] with respect to other elements falls out of from its status as an affix. If [n̩t] is affixed in the lexicon to auxiliaries, then the result is a negative auxiliary. That is, the words "hasn't" and "has," for example, should exist alongside one another, differing only in that the former is lexically specified for negation. It is not clear, then, why the sequence [hæz] in "has" can reduce to [z] and cliticize onto the subject, but the same sequence in "hasn't" may not reduce, e.g. to [zn̩t]. The words "has" and "hasn't" presumably have the same status if they are listed as auxiliaries, so both should be able to behave as simple clitics according to Zwicky and Pullum. This issue is not treated by Z&P because they only consider a representation of **he'sen't*, for example, which involves cliticization of "has" to the subject "he," followed by (impossible) affixation of [n̩t] to the auxiliary. Within their own system, however, the explanation for the restriction against cliticization of the word "hasn't" is not obvious, though the restriction must be taken seriously since the problem arises under any analysis in which "has" and "hasn't" are counterparts.

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[67] Z&P also claim that [n̩t] + modal sequences exhibit semantic idiosyncrasy; Roberts (1998), however, points out that the scope of negation with respect to different modals can be understood as an effect of the different base positions of the modals themselves.

4.1.1.1 Auxiliary Reduction and [n̩t]

On the current approach, an alternative explanation for the effects in (1)-(4) is available. Rather than attributing the ungrammaticality or phonological idiosyncrasy to properties that [n̩t] has by virtue of its status as an inflectional affix, it is possible to retain a view in which [n̩t] is a realization of raised [Neg] but its presence in T interacts with the other heads in T to condition various kinds of contextual allomorphy. I propose that if we recognize the reduced auxiliaries as contextual allomorphs[68] of the full forms, the analysis of negation developed in Chapter 3 can be exploited here to prevent the reduced allomorphs from occurring when [Neg] occurs within the same complex head as v_{AUX}. Likewise, the analysis provides a representation in which the presence of [Neg] in T triggers a readjustment rule that affects the phonological form of *do* and certain modals, and in some cases results in ineffability that is manifested as an accidental gap.

The reduced auxiliaries are seemingly optional variants of their full counterparts in declaratives like those in (5)-(6). They are not generally barred from appearing when [Neg] is in the clause, rather only when [n̩t] realizes [Neg], as in the (f) examples.

(5)
a. I have seen The Godfather.
b. I've seen The Godfather.
c. I have not seen The Godfather.
d. I've not seen The Godfather.
e. I haven't seen The Godfather.
f. *I'ven't seen The Godfather.

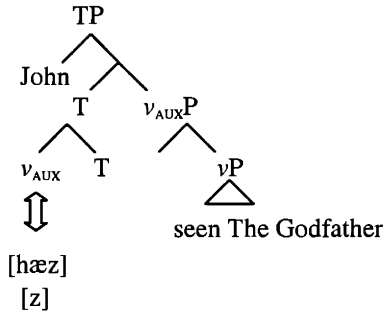
(6)
a. John has visited New York.
b. John's visited New York.
c. John has not visited New York.
d. John's not visited New York.
e. John hasn't visited New York.
f. *John'sn't visited New York.

The cases in which the reduced allomorph optionally surfaces can be analysed as in (7).

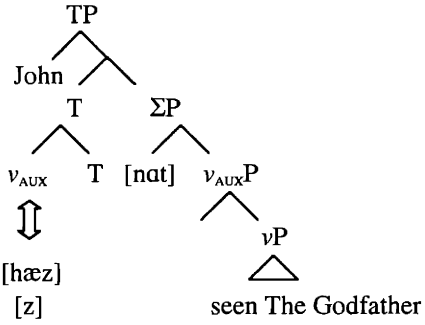
[68] According to Kaisse (1983) "the reduced forms are not derived from the full forms by phonological rules, but are rather suppletive allomorphs, to be listed in the lexicon alongside the full forms. AR, then, is not precisely a reduction rule, but rather a rule or set of rules stating the circumstances under which the reduced allomorph may be inserted. Ultimately I will argue that AR is achieved in two stages: First, a restructuring (cliticization) rule Chomsky-adjoins the AUX to the preceding word; then, a morphological spelling rule optionally realizes it as the reduced variant."

(7)

a. John has seen The Godfather.
John's seen The Godfather.



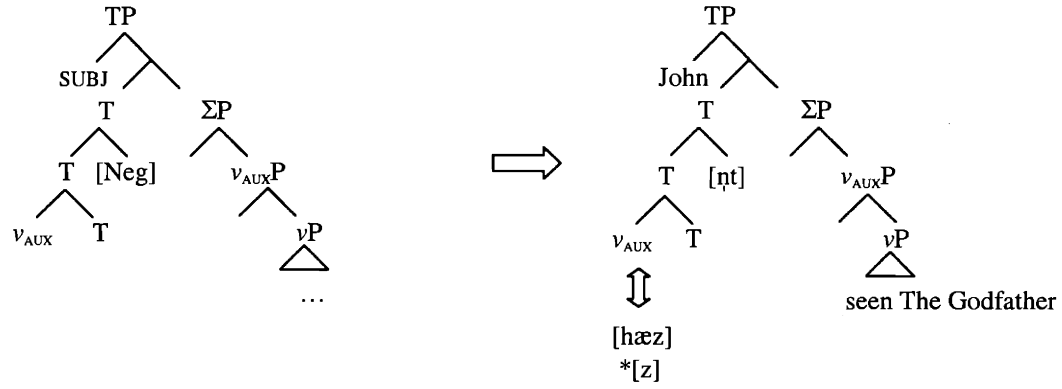
b. John has not seen The Godfather.
John's not seen The Godfather.



What we notice here is that the choice of the reduced allomorph is freely available when there is no material within T other than v_{AUX} and T. This is not the case when [n̩t] is present, since the presence of [n̩t] implies [Neg] is in T along with v_{AUX} and T.

(8)

*John'sn't seen The Godfather.
John hasn't seen The Godfather.



It seems that when v_{AUX} and T do not exhaust the complex head in which they co-occur, the reduced form of the auxiliary cannot be inserted. In (8), the presence of [Neg] in T prevents v_{AUX} and T from exhausting T. This can be thought of as a structural condition on the insertion context of the reduced auxiliary variant.

The idea is illustrated in (9). The reduced form of 3rd sing. HAVE can only be inserted if HAVE and T exhaust the highest segment of T. The presence of [Neg] precludes insertion of the reduced allomorph [z] in (8), but not in either case in (7).

(9)
a. $[_T [v_{AUX}$ HAVE] –past/3sg] ↔ [z]
b. [HAVE] ↔ [hæ][69]

(9)a is intended to represent the case when v_{AUX} and T exhaust T, i.e. when there is no other material in T.

Note that the insertion contexts in (9) should not represent the typical subset relationship seen for Vocabulary Insertion into a given head. It is not the case that the reduced allomorph must be inserted whenever the structural description of (9)a is met. As (7) illustrated, the reduced allomorph is simply an option in such circumstances. The specification in (9)a does the work of barring the reduced allomorph from those contexts in which it has been seen to be ungrammatical.[70]

The approach outlined above treats the reduced and full variants of the auxiliary as different allomorphs (as in *fn* 2)[71]. It is not clear whether the reduced variant is simply listed as Vocabulary Item or is derived by some phonological process, but it seems to result from fusion of v_{AUX} and T that can only proceed when T and v_{AUX} exhaust the highest segment of T.

According to (9), there is nothing special about the presence of [Neg], per se, in T that bars the reduced variant from insertion. Rather, the restriction against Auxiliary Reduction with [n̩t] is simply a consequence of v_{AUX} and T not being alone in the complex head in which they occur. This predicts that the reduced allomorph will be barred from insertion in other cases in which v_{AUX} and T fail to exhaust the complex head they occur in. Indeed, this seems to be the case. An examination of the English auxiliary variants and the contexts they may occur in confirms this. All the auxiliaries that have reduced variants allow both in declaratives, but in polar questions in which T PF raises to C, the reduced variant is ungrammatical. As (10)

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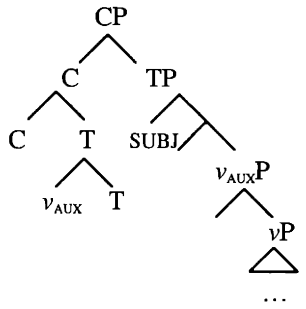
[69] It is possible that *has* actually decomposes into $[_{AUX}$ hæ] + $[_T$ z]. According to Halle (1997), [z] is the spellout of a fused present Tense and 3rd person singular Agreement head in English, even for irregular verbs like "ha-s" and "do-es." Further investigation as to whether (9a) involves impoverishment of the auxiliary features would be interesting.

[70] Many factors affect whether the reduced or full allomorph is chosen, including differences of register. These factors seem to make the full form available even when structural context alone chooses the reduced form.

[71] Kaisse focuses on a number of effects of following context on the availability of the reduced auxiliary allomorphs.
i. I don't know where$_i$ he is/*he's t_i tonight.
ii. John's a better dancer than he is/*he's ∅ an actor.
Deletion or trace sites following AUX seem to preclude Auxiliary Reduction. The analysis developed here does not capture these facts, but is compatible with approaches in the literature such Pullum and Zwicky (1997), who suggest that an approach in which a deletion site in the following context prevents AR is incorrect. They propose that the auxiliaries must be accented in the syntactic contexts in (i.-ii), but that reduced auxiliaries are inherently deaccented.

illustrates, when T occurs in C, v_{AUX} and T do not exhaust the complex head in which they occur. Given (9), the reduced allomorphs are not expected in interrogatives; the data in (13), (18), and (21) illustrate the restriction.

(10)



The following tables and data sets provide, for the sake of completeness, an overview of the full and reduced forms of the auxiliaries BE and HAVE, and where each form may occur.

(11) BE nonpast

	Sing.		plural	
	full	reduced	full	reduced
1	am	'm	are	're
2	are	're	are	're
3	is	's	are	're

(12)

a. I am bored / I'm bored.
b. You are bored / You're bored.
c. He is bored / He's bored.
d. We are bored / We're bored.
e. You are bored / You're bored.
f. They are bored / They're bored.

(13)

a. Am I bored? / *'m I bored?
b. Are you bored? / *'re you bored?
c. Is he bored? / *'s he bored?
d. Are we bored? / *'re we bored?
e. Are you bored? / *'re you bored?
f. Are they bored? / *'re they bored?

The contrasts in (13) confirm that reduced allomorphs are barred in the configuration in (10).

(14) BE past

	Sing.		plural	
	full	reduced	full	reduced
1	was	∅	were	∅
2	were	∅	were	∅
3	was	∅	were	∅

(15)

a. I was bored.
b. You were bored.
c. He was bored.
d. We were bored.
e. You were bored.
f. They were bored.

(16) HAVE nonpast

	Sing.		plural	
	full	reduced	full	reduced
1	have	've	have	've
2	have	've	have	've
3	has	's	have	've

(17)

a. I have given up. / I've given up.
b. You have given up. / You've given.
c. He has given up. / He's given up.
d. We have given up. / We've given up.
e. You have given up. / You've given up.
f. They have given up. / They've given up.

(18)

a. Have I given up? / *'ve I given up?
b. Have you given up? / *'ve you given up?
c. Has he given up? / *'s he given up?
d. Have we given up? / *'Ve we given up?
e. Have you given up? / *'Ve you given up?
f. Have they given up? / *'Ve they given up?

Again, the contrasts in (18), and (21) below, reflect the constraint against reduced allomorphs within C.

(19) HAVE - past

	Sing.		plural	
	full	reduced	full	reduced
1	had	'd	had	'd
2	had	'd	had	'd
3	had	'd	had	'd

(20)

a. I had given up. / I'd given up.
b. You had given up. / You'd given up.
c. He had given up. / He'd given up.
d. We had given up. / We'd given up.
e. You had given up. / You'd given up.
f. They had given up. / They'd given up.

(21)

a. Had I given up? / *'d I given up?
b. Had you given up? / *'d you given up?
c. Had he given up? / *'d he given up?
d. Had we given up? / *'d we given up?
e. Had you given up? / *'d you given up?
f. Had they given up? / *'d they given up?

The fact that the reduced allomorphs are not available in polar questions is attributed to the fact that T is in C. It could be objected that the source of ungrammaticality in these cases

should rather be attributed the fact that there is nothing to the left of the reduced auxiliary for it to "cliticize" onto. However, this potential objection is falsified by data such as (22).

(22)
a. Not only is Louis smart, he's also a varsity rower.
b. *Not only's Louis smart, he's also a varsity rower.

In Negative-inversion, the reduced form of the auxiliary is not permitted, even though there is preceding phonological material to support it. Kaisse (1983) uses this example as evidence that the reduced allomorphs crucially require a preceding NP host, but the approach here is able to derive the insertion conditions without reference to anything but the head into which Vocabulary Insertion takes place. Furthermore, the data in (23) provide counterevidence for Kaisse's generalization.

(23)
a. i. Not one book is Flap giving to Emma.
   ii. *Not one book's Flap giving to Emma.
b. i. Not one book is on the table.
   ii. Not one book's on the table

A preceding NP is not sufficient in (23)aii to license the reduced auxiliary in negative inversion, although the same negative NP serves as a host for cliticization in (23)bii, where no inversion is involved.[72]

The ban on reduced allomorphs when T raises to C points to an asymmetry in the structure of polar questions and *wh*-questions at PF. The reduced allomorphs are licit in *wh*-questions, despite PF raising of T to C.[73] Some examples are given in (24).

(24)
a. What is he doing?
b. What's he doing?
c. Why is he talking to his horse?
d. Why's he talking to his horse?

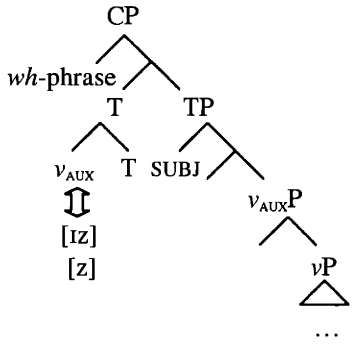
[72] I assume that negative inversion involves PF raising of T to the head of the projection whose specifier the negative phrase raises to.

[73] The availability of the reduced allomorphs in subject *wh*-questions is not particularly telling since such interrogatives may not involve inversion, in which case the option of inserting the reduced auxiliary is predicted on any analysis.
i. Who is that masked man? ii. Who's that masked man?

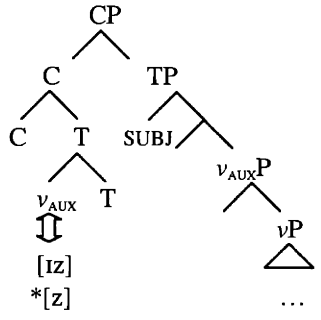
These examples suggest that at the point of Vocabulary Insertion, C is no longer visible to [v_{AUX} + T] in *wh*-questions. The trees in (25) illustrate the relevant difference between the two kinds of questions at PF.

(25)

a. What is he doing?
What's he doing?



b. Is he bored?
*'s he bored?



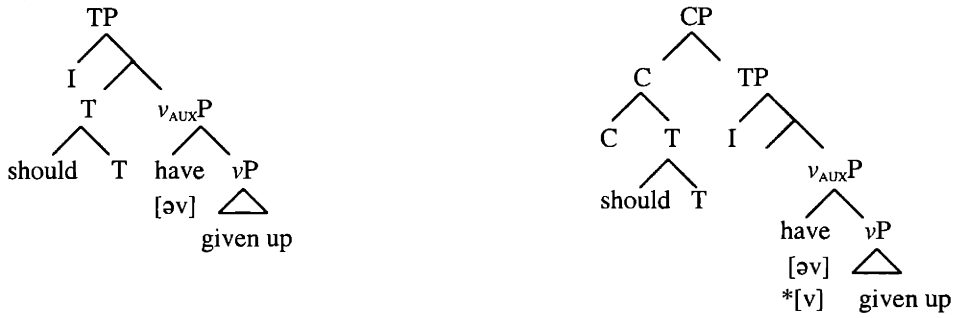
The contrast in (25) likely stems from a difference in the feature content of C in polar questions and *wh*-questions. A reasonable hypothesis is that the morpheme that triggers inversion in polar questions, call it Q, is interpretable and must not be deleted at Spellout since it is responsible for the interpretation of the clause as a question. The morpheme that triggers inversion and attracts the *wh*-word to its specifier in *wh*-questions, call it [uWh] following Pesetksy and Torrego (2001), is uninterpretable, and thus can and apparently must be deleted at Spellout. Nothing in P&T's analysis, however, predicts that [uWh] *must* be deleted at Spellout; indeed, other uninterpretable features survive until PF and have reflexes in the overt phonology in the form of case and/or agreement. The difference between (25)a and (25)b is not at present forced by the theory and thus provides the impetus for further inquiry into the fate of uninterpretable features at Spellout; I raise the issue for future research, but can offer no insight at this point.

There is further evidence for the position that the reduced allomorphs crucially realize v_{AUX} and T together. We have seen that HAVE can reduce to [v] in examples like *I've given up* and *You've given up*. Yet not every instance of HAVE reduces to [v]; only tensed HAVE does.

(26)

a. I should HAVE given up. [hæv]/[əv]
b. Should I HAVE given up? [hæv]/[əv]/*[v]
c. I HAVE given up. [hæv]/*[əv]/[v]

(27)



There is a special reduced allomorph for unraised HAVE, [əv]. This is clearly a distinct allomorph and not, for instance, [v] with an epenthetic vowel inserted due to the final consonant in *should* in (26)a; when HAVE that has not raised to T follows the subject *I*, the reduced form is still [əv], as in (26)b. The sequence *I've* [ajv] is licit, but only arises when allowed when HAVE is in T, since only then is [v] a possible realization of HAVE.

4.1.1.2 Modals and [n̩t]

The idiosyncratic forms of the modals require a slightly different treatment than that provided for auxiliary reduction. Unlike the reduced auxiliaries, in which both forms are optional in declaratives without raised negation, these forms show up only in the context of [n̩t]. Thus, while the local presence of negation blocked the reduced allomorph of the auxiliaries, only the local presence of negation licenses the reduced form of the modals.

(28)

a. Tommy [wo]n't see The Godfather.
b. *Tommy [wo] see The Godfather.
c. Tommy [kæ]n't see The Godfather.
d. *Tommy [kæ] see The Godfather.
e. Tommy [ʃæ]n't see The Godfather.
f. *Tommy [ʃæ] see The Godfather.

In the case of the modals, then, the phonological effect seems to be tied directly, rather than indirectly as above, to the presence of [Neg] in T. Furthermore, the phonological effect on the modals is predictable, whereas the form of the reduced auxiliaries is not. The modals with a final sonorant lose that segment in the context of [Neg], and may undergo an additional vowel quality change.

(29)

a. [CAN] ↔ [kæ] / __ [Neg]
↔ [kæn]

b. [SHALL] ↔ [ʃæ] / __ [Neg]
↔ [ʃæl]

c. [WILL] ↔ [wo] / __ [Neg]
↔ [wɪl]

Support *do* seems to be affected by this process as well.

(30)

a. [DO] ↔ [do] / __ [Neg]
↔ [duw]

A case in which there is a gap in the context of raised negation is *may* in some dialects. It seems that [mej] should be subject to final sonorant deletion as [duw] is. For some reason, neither [ment] nor some form with a vowel change such as [munt] (involving the [-back] to [+back] vowel change from *will* to *won't)*, or [mont] (subsequently involving the [-high] to [+high] vowel change from *do* to *don't*) is available. The form of [mej] after the predicted application of final sonorant deletion appears to be unpronounceable for some reason.

(31)

a. [MAY] ↔ [e͡ɪ] / __ [Neg]
↔ [mej]

It is unclear why this gap exists when diphthong-final *do* has recourse to a reduced form with deletion of its glide.

4.1.1.3 Vocabulary Insertion

The difference between the reduced auxiliaries and the modals falls out of the insertion contexts of each verbal type, and groups them accordingly into two cases. The case in which both allomorphs optionally surface regardless of the presence of negation (the reduced auxiliaries) is the case in which it is not [Neg] itself that exerts an effect. The case in which one allomorph only occurs with negation (the modals) is the case in which [Neg] itself exerts an effect, with [Neg] acting as a positive context for the allomorphy.

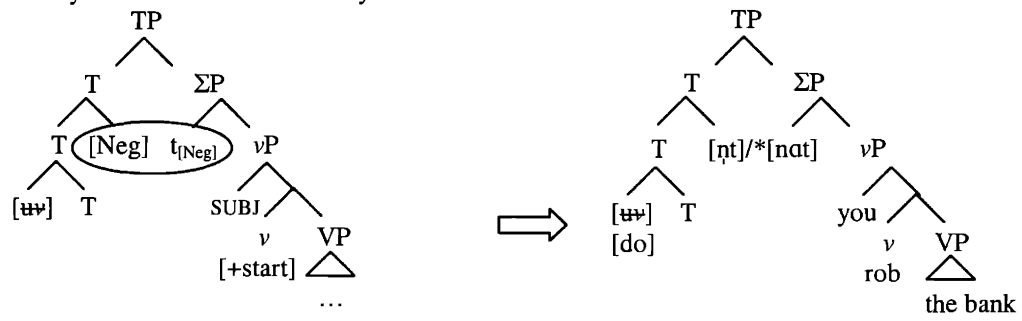
The approach to the modals fits into existing work on vocabulary insertion. Bobaljik (2000) argues that vocabulary insertion proceeds from root out in a head, and that vocabulary items replace the bundle of features which they realize. Thus, for an inner feature bundle,

vocabulary insertion can be sensitive only to morphosyntactic features of outer terminals, because the outer terminals have not yet been replaced by phonological material. Conversely, for a more peripheral feature bundle, vocabulary insertion can only be sensitive to the form/phonological material of inner terminals, because only the phonological material is visible, the morphosyntactic features having been replaced. Assuming Bobaljik's approach, the readjustment rule that applies to the modals and *do* is triggered by the presence of the feature [Neg].

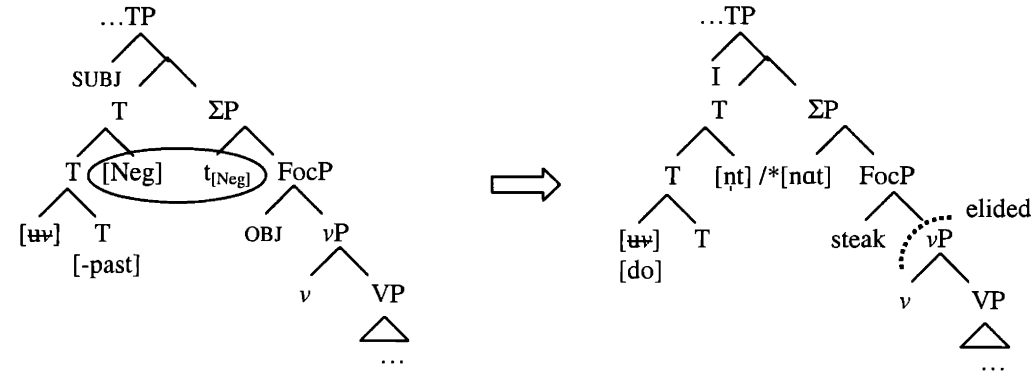
Bobaljik's conclusion that inward sensitivity can only be to particular lexical items helps us to rule out alternative analyses to those proposed in this section. For example, one alternative would be that the form of negation is dependent on the choice of auxiliary allomorph before it. Thus, [n̩t] would carry a statement that barred it from occurring with *'ve*, *'s*, *'d*, etc. Because vocabulary insertion into the [Neg] that occurs in T should only be sensitive to the form of inner terminals, and can't be sensitive to their morphosyntactic features, this amounts to listing each individual item [n̩t] can't co-occur with – it misses the generalization that these items are all (reduced) auxiliaries. For the modal facts, [n̩t] would have to carry the statement that it can't occur with the forms *can*, *shall*, *will*, etc. Since this amounts to sensitivity to these vocabulary items themselves, it misses the generalization that they are all modals. To my knowledge, however, this approach has not been advocated anywhere in the literature.

One alternative that has been proposed is that of Frampton (2001). On Frampton's analysis, [Neg] always raises to T, and a choice must be made whether to spell out the head of the chain or the tail. The head for Frampton is also exclusively spelled out as [n̩t], and the tail as [nɑt]. Frampton argues that in general the head of the chain is spelled out, and that the tail may only be spelled out if the movement was vacuous, i.e. if the head and the chain end up linearly adjacent to one another. This part of Frampton's analysis is actually falsified by the pseudogapping and imperative facts discussed in the previous chapter. As an examination of (32) and (33) reveal, the head and tail of the [Neg] chain end up adjacent to one another, yet [nɑt] is still unable to occur.

(32)
Don't you rob the bank! *Do not you rob the bank!



(33)
(Although I do like pizza,) I don't steak$_i$ [$_{VP}$ ~~like t$_i$~~]
*I do not steak.



Frampton's approach to the modal facts is as follows: the modals have two allomorphs, but the reduced forms are only available if [Neg] is in the derivation, while the unreduced forms are always available. If the reduced forms are chosen, they demand spellout of the head of the [Neg] chain, while if the unreduced forms are chosen, they demand spellout of the tail of the [Neg] chain.[74] For example, [wo] demands spellout of the head of the [Neg] chain, guaranteeing it co-occurs with [nt], and [wɪl] demands spellout of the tail of the [Neg] chain, guaranteeing that it co-occurs with [nɑt]. It is not precisely clear, however, how an inner item can force a choice in spelling out the chain that an outer item belongs to. Though this approach does group the behavior of the types of allomorphs together, we lose the insight that the reduced forms are affected by a common readjustment rule. We also lose the insight that this readjustment is triggered by the presence of [Neg] in T, since for Frampton [Neg] always raises to T.

[74] For Frampton, [Neg] raising occurs in the syntax.

4.1.1.4 *Amn't

The application of the readjustment rule deleting final sonorants in the context of [Neg] may extend to a well-known problematic datum in English, the non-existence of *amn't*.

(34)
a. I am not so sure about this.
b. I'm not so sure about this.
c. *I amn't so sure about this.

(35)
[BE – 1sg] ↔ [💣] / __ [Neg]
↔ [æm]

(36)
[æm] → [æ] / __ [Neg]

Note that the application of the readjustment rule as in (36) could be responsible for the creation of the form *ain't*. Final sonorant deletion results in [ænt] (once [n̩t] is filled in for [Neg]), which for some reason is ill-formed as is. Vowel quality change creates the output, *ain't*, though this is not available in all dialects. In standard English, there is no Vocabulary item available in this case, just as in the case of the missing rhyming **mayn't*. However, in Standard American English, *aren't* is a possible spellout of *am+n't* in limited circumstances. This could have come about through backformation if the output of the sonorant deletion readjustment rule, [ænt], existed at a some historical stage and was mistaken for a form from an English dialect with *r*-deletion. It is not clear why this form should be limited to occurring only under inversion, when the auxiliary raises to C in an interrogative. While (34)c and (37) illustrate that in declaratives there is no available form for 1st person singular BE in the context of raised negation, (37)c shows that in interrogatives there is recourse to the form *aren't* for 1st person singular BE.

(37)
a. I am not the Pope.
b. *Amn't I the Pope?
c. Aren't I the Pope? (cf. I'm the Pope, aren't I?)
d. *I aren't the Pope.

Analyses exist that propose that (37)c results from impoverishment of the 1st person feature (or its OT equivalent) just when BE occurs in C, resulting in insertion of the less specified form *aren't* (Frampton 2001, Bresnan 2001). The discussion here does not resolve, or even contribute

to, the issue of why *aren't* is available to fill the gap left by **amn't* only in cases of inversion – it is simply meant to suggest that overapplication of the final sonorant deletion readjustment rule could account for the absence of the form in the first place.

4.2 LF Interactions

4.2.1 Neg-raising and the spellout of Negation

In Chapter 3, the two spellout forms for sentential negation, [n̩t] and [nɑt], are treated as contextual allomorphs in complementary distribution, the former being the phonological exponent inserted into [Neg] in its raised position within T. A featural relationship is posited to hold between T and [Neg] in order to account for raising. By hypothesis, T contains an [uΣ] feature that allows for PF raising of [Neg], the head of ΣP, to T. One consequence of assuming this particular feature content of T is a very strong prediction about the correlation between the spellout of negation and the clause in which negation is interpreted.

This approach predicts that matrix T with [uΣ] can, in principle, optionally attract negation from a lower clause should no ΣP occur in the higher clause. Furthermore, it predicts that a [Neg] attracted from a subordinate clause directly to matrix T, like any [Neg] attracted to T, will necessarily be spelled out [n̩t], given the insertion conditions for [Neg]. This strong prediction is borne out in the domain of Neg-raising.

Neg-raising (NR) is the phenomenon by which matrix negation is optionally interpreted with respect to a subordinate clause predicate (cf. Horn 2001). For example, (38) has two available interpretations – the transparent reading in (a), and the NR reading in (b).

(38)
Patsy didn't think that Emma left.
a. 'It is not the case that Patsy thought that Emma left.'
b. 'Patsy thought that Emma didn't leave'

One class of approaches holds that the NR reading arises through raising of negation from a subordinate clause NegP to the matrix clause – essentially, negation is spelled out in the higher clause but interpreted in its base position. Along these lines, I argue that NR instantiates attraction of [Neg] from the subordinate clause directly to the matrix T. As such, the NR reading should be unavailable with [nɑt]; it is simply not possible to realize a [Neg] that has raised to T as anything but [n̩t]. (39) shows that the NR reading in fact disappears with *not*.

(39)
Patsy did not think that Emma left.
a. 'It is not the case that Patsy thought that Emma left'
b. *'Patsy thought that Emma didn't leave'

Though the judgment is somewhat obscured because (a) is entailed by (b), it nonetheless holds. To the extent that examples of NR with matrix *not* exist in the literature, I believe this entailment is responsible for judgment that examples like (39) have an NR interpretation. Below, further evidence for the contrast from NPI licensing will bring out the contrast between [n̩t] and [n*a*t] with respect to the availability of an NR reading more robustly. The uniform analysis of sentential negation argued for in Chapter 3 makes the surprising but correct prediction that NR is only possible with the [n̩t] allomorph.

4.2.1.1 Neg-raising and [n̩t]

The technical issue under scrutiny here revolves around the effects on convergence in a derivation in which T contains the feature [uΣ] in a matrix clause without ΣP. Typically, the derivation will crash because [uΣ] on matrix T cannot be checked in the absence of a [Neg] with which to establish Agree. When the matrix predicate is a so-called Neg-raising predicate, however, it is possible to establish an Agree relationship with a [Neg] head from the subordinate clause, followed by raising of [Neg] to matrix T.[75]

According to Horn (2001 p.323), the English Neg-raising triggers include *think, believe, suppose, imagine, expect, reckon, feel, seem, appear, look like, sound like, feel like, be probable, be likely, figure to, want, intend, choose, plan, be supposed to, ought, be desirable, advise, and suggest.* With these predicates, negation can be interpreted with respect to either the matrix or complement clause. Horn characterizes the contrast in interpretation as in (40).

(40) x doesn't believe that *p*
a. 'x believes that not-*p*'
b. 'It is not the case that x does believe that p.'

(41) and (42) illustrate the contrast between the Neg-raising predicate *think* and the non-Neg-raising predicate *say* in terms of the availability of both interpretations.

[75] One possibility is that CP under Neg-raising predicates is not a phase. Another is that the C of the complement clause to these predicates Agrees with [Neg], allowing for what looks like successive cyclic movement of [Neg], although we remain non-commital on the movements [Neg] undergoes in this scenario.

(41) Flap didn't think Emma left.
a. 'Flap thought Emma didn't leave.'
b. 'It is not the case that Flap thought Emma left.'

(42) Flap didn't say that Emma left.
a. *'Flap said that Emma didn't leave.'
b. 'It is not the case that Flap said that Emma left.'

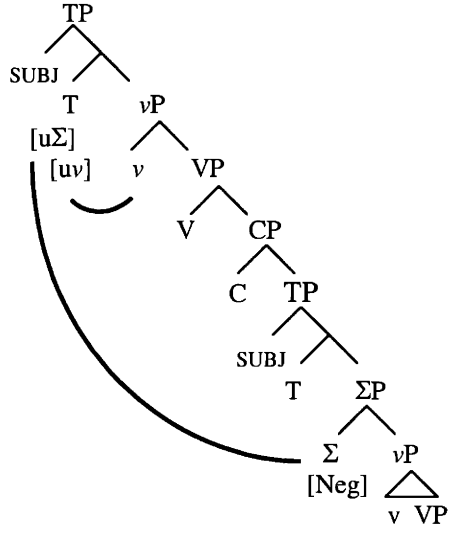
As indicated in (42)a, the NR reading is not available for the predicate *say*. The NR reading disappears for the Neg-raising predicate when matrix negation is spelled out [nɑt].

(43) Flap did not think Emma left.
a. *'Flap thought Emma didn't leave.'
b. 'It is not the case that Flap thought Emma left'

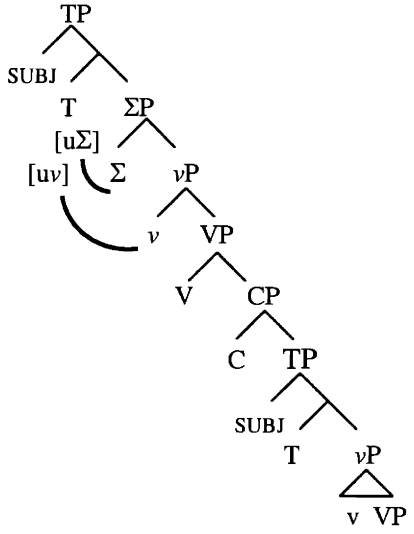
This unavailability of the NR reading reflects the fact that (43) cannot have a representation in which negation has raised from the lower clause; lower clause negation that raises to the matrix clause is attracted to T, where it can only be spelled out as [n̩t].

The relevant derivations are represented in (44).

(44) NR interpretation: no ΣP in matrix clause
a. Flap didn't think that Emma left.
a'. *Flap did not think that Emma left.
'Flap thought that Emma didn't leave.'



Transparent interpretation: ΣP in matrix clause
b. Flap didn't think that Emma left.
b'. Flap did not think that Emma left.
'It is not the case that Flap thought Emma left.'



(44)a illustrates the structure that corresponds to the NR interpretation, with ΣP in the lower clause. Agree between [uΣ] on matrix T and [Neg] is followed in the PF component by raising of [Neg]; negation is pronounced in the matrix clause but is limited to [n̩t]. (44)b illustrates the structure that corresponds to the transparent interpretation, with matrix ΣP. Matrix

T optionally attracts [Neg], so [n̩t] and [nɑt] are both permitted. Thus, only when [n̩t] is the spellout of negation in the matrix clause is the interpretation ambiguous between the NR and transparent interpretation with the relevant predicates.

Note that the (non-)availability of alternative pronunciations for the structures in (44) closely correlates with the available interpretations. If [Neg] does not raise to matrix T in a structure like (44)a, then it can be spelled out in the subordinate clause as either [nɑt] or [n̩t].

(45)
a. Flap thought Emma did not leave.
b. Flap thought Emma didn't leave.

Both (45)a and b have the same interpretation as (44)a since they are structurally identical; the three differ only at PF. There are, for obvious reasons, no alternative PFs for (44)b and b' with the same interpretation, as they already exhaust the possible realizations of matrix ΣP.

Further evidence for the claim that the NR reading with matrix [n̩t] arises from cross-clausal [Neg] raising can be adduced from a correlation with the interpretation of negative polarity items. Matrix [n̩t] can license a strict NPI[76], one which requires licensing by negation within the same clause, in the subordinate clause in a Neg-raising clause. This is not possible with matrix [nɑt], however. Thus, there is a correlation between the availability of the NR reading with the ability of matrix negation [n̩t] to license a strict NPI in the subordinate clause, and there is a correlation between the lack of the NR reading and the inability of matrix negation [nɑt] to license a subordinate clause strict NPI.

(46)
Flap didn't think Emma arrived until noon.
a. 'It wasn't until noon that Flap thought that Emma arrived'
b. 'Flap thought Emma's arrival didn't occur until noon.'

Because (46) can involve a matrix or subordinate ΣP, *until noon* can be interpreted either with respect to the matrix predicate think or the subordinate predicate arrive. Under the transparent reading in (a), *until noon* must be interpreted in the higher clause; under the NR reading in (b), *until noon* must be interpreted in the lower clause. This contrasts with the situation in (47).

[76] Horn (2001) notes that "strict polarity items like *until midnight, in weeks*, or *for some time* in English, normally requiring a tautoclausal negative trigger ... are acceptable [in Neg-raising contexts] although this requirement is apparently violated at surface structure." (p. 313)

(47)
Flap did not think Emma arrived until noon.
a. 'It wasn't until noon that John thought Emma arrived.'
b. *'Flap thought Emma's arrival didn't occur until noon.'

Because [nɑt] can only reflect matrix ΣP, *until noon* can only be licensed in the higher clause. Though (47) is potentially structurally ambiguous in terms of the position of the PP *until noon*, the lack of semantic ambiguity underscores that, in fact, the PP can only branch from a point in the matrix clause.

The constraints on interpretation of strict NPIs relative to the matrix and subordinate predicates provide further evidence for the explanation in (44), and should help to sharpen the relevant judgments. A final piece of evidence exists, this one from an actual grammaticality contrast rather than a correlation with available interpretations. If a strict NPI is syntactically "caught" in the complement clause of a Neg-raising predicate, the result is ungrammatical with [nɑt] but grammatical with [n̩t].

(48)
a. Flap didn't think that Emma admitted until noon that she was guilty.
b. *Flap did not think that Emma admitted until noon that she was guilty.
'Flap thought Emma didn't confess until noon.'

The example in (a) is only grammatical on the provided NR reading, but the (b) example is not grammatical on any interpretation. (48)a gets only the NR reading because the NPI cannot be structurally in the higher clause; since it must have a tautoclausal licenser to appear grammatically, matrix [n̩t] must have originated in a subordinate clause ΣP. Following this logic, (48)b is ungrammatical because matrix [nɑt] could not have originated in a subordinate clause ΣP.

Note that when the NPI is structurally ambiguous, the grammaticality contrast is neutralized and the semantic ambiguity with [n̩t] returns.

(49)
a. Flap didn't think that Emma admitted she was guilty until noon.
'Flap thought Emma didn't confess until noon.' (NR)
"It wasn't until noon that Flap thought Emma confessed.' (transparent)
b. Flap did not think that Emma admitted she was guilty until noon.
'It wasn't until noon that Flap thought Emma confessed.' (transparent only)

The reading of (49)b can be brought out with the continuation in (50)a. The continuation in (50)b, on the other hand, reads as a non-sequitur because the NR reading, in which the confession does not occur until noon, is absent.

(50)

a. Flap did not think that Emma admitted she was guilty until noon – he finally realized it when he hadn't heard from her by then.

b. #Flap did not think that Emma admitted she was guilty until noon – she's a late riser.

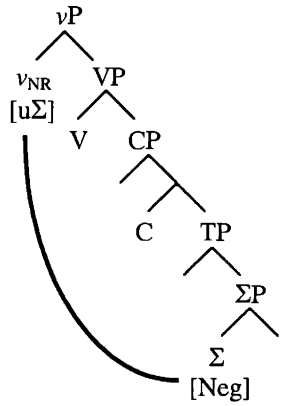
4.2.1.1.1 A technical implementation

The picture in (44) presents the explanation of the [n̩t]/[nɑt] asymmetry in Neg-raising in broad strokes; a finer-grained explanation is required, as several technical issues arise from the hypothesized cross-clausal raising of negation. One set of questions has to do with the establishment of Agree between matrix T and subordinate [Neg]. Chapter 3 argued that head movement is PF movement, where PF head movement instantiates late adjunction of the head containing a goal to the higher head that contains its associated probe; essentially, PF movement resembles syntactic movement that happens in the Morphological component. How does matrix T attract [Neg]? A second set of issues has to do with *do*-support. If [Neg] raises to the matrix clause at PF, how does it cause *do*-support.

A possible implementation of the raising was hinted at in fn. 12; I spell it out more concretely here to indicate what syntactic relations between elements must be established in order to allow for cross clausal raising of [Neg] with Neg-raising predicates.

The Neg-raising predicate selects a non-phase CP complement. Neg-raising predicates are those V's that can be taken as complements by a matrix *v* that contains [uΣ], call it v_{NR}.

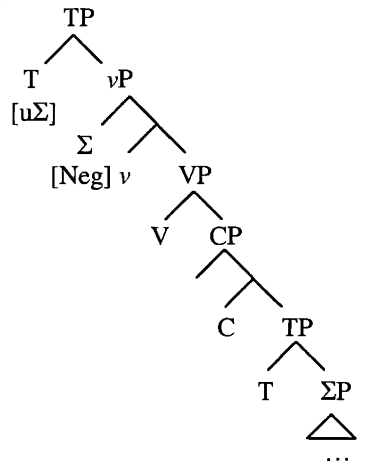
(51)



Because CP is not a phase boundary in (51), *v* is able to Agree with Σ.[77] [Neg] is attracted to an intermediate landing site in [spec, *v*P] by the end of the *v*P phase, similar to the intermediate position in successive cyclic *wh*-movement. In this sense, the initial movement of [Neg] appears to occur in the syntax. Because the [Neg] feature must be visible for subsequent Agree with the matrix T, this is a desirable consequence.

At the point of merger of matrix T, the representation is as in (52).

(52)



[Neg], at the edge of the *v*P phase, is visible within the search domain of T. The [uΣ] feature on T Agrees with [Neg]. This Agree relation must be followed up by PF movement of [Neg] to T before Vocabulary Insertion; [Neg] may not remain in the intermediate [spec, *v*P] landing site.[78]

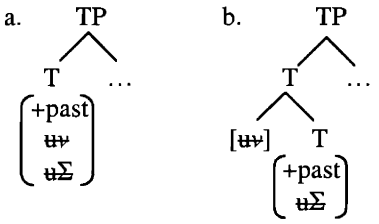
Consider now that the standard configuration for *do*-support involves a matrix ΣP (i.e. a ΣP sister to matrix T, not a ΣP in a lower clause). The argument in this chapter has been that Neg-raising involves only a subordinate clause ΣP, yet *do*-support is required in the matrix clause. In (52), [Neg] must somehow disrupt the relationship between T and *v* in such a way that Lowering of T is blocked. In Chapter 3, it was proposed that *do*-support results from spelling out the [~~u~~*v*] feature on T as a form of *do* when Structural Locality between T and *v* fails unless T contains a *v* (i.e. a modal or raised auxiliary/copula) before Vocabulary Insertion. In such cases,

[77] Alternatively, if phases are shipped to interpretation at the next strong phase level, as suggested in Chomsky (2001a), then the CP complement to a Neg-raising predicate could still be a strong phase, with matrix *v* still able to see the [Neg] head of the embedded ΣP.

[78] Barring spellout of [Neg] in the intermediate [spec, *v*P] position is reminiscent of the inability of *wh*-phrases to stop in intermediate phase edges; it is possible that these restrictions stem from a common principle. Alternatively, obligatory further raising to T may indicate that there is no candidate allomorph for insertion into [Neg] in [spec,*v*P]. The latter possibility complicates the position in Chapter 3 that [nɑt] is the elsewhere realization of [Neg], which predicts that [nɑt] is a possible spellout of [Neg] in (52).

as last resort process of fission dissociates the checked (but not deleted) [~~uv~~] feature from the feature bundle of T, as in (53)a. T is licensed by adjacency with a *v*-feature; [~~uv~~] is spelled out as a form of *do*.

(53)



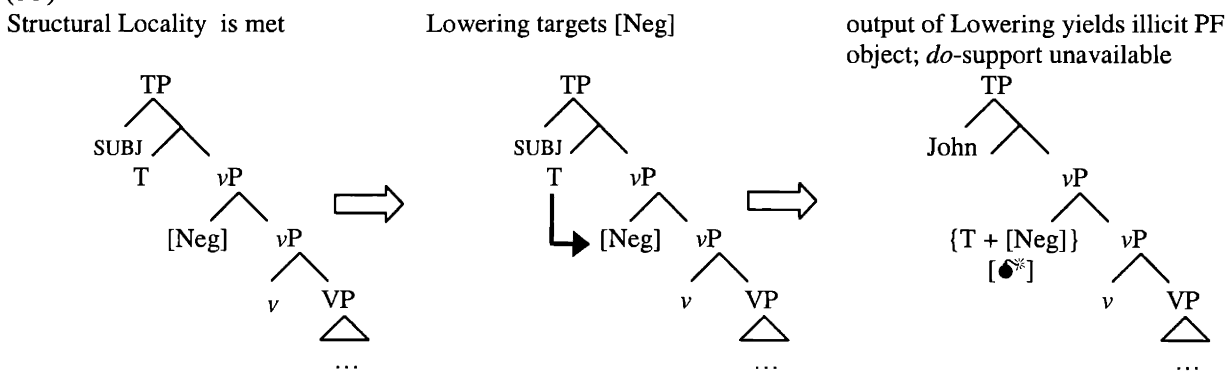
The configuration in (52) does not meet the structural description for the morphological operation on T in (53). It would not do to suggest that merger of [Neg] to *v*P actually projects the label ΣP, since an incorrect prediction would follow that [Neg], as the head of ΣP, could be spelled out as [nɑt] in the higher clause when raised from the subordinate clause. It remains to be explained why the configuration in (52) triggers *do*-support, particularly when *do*-support is not a viable last resort in the almost identical structural representations involving constituent negation discussed in Chapter 3; the facts are repeated in (54), the analysis in (55).

(54)

a. *John always not agreed.

b. *John did always not agree. (≠ John díd always not agree)

(55)

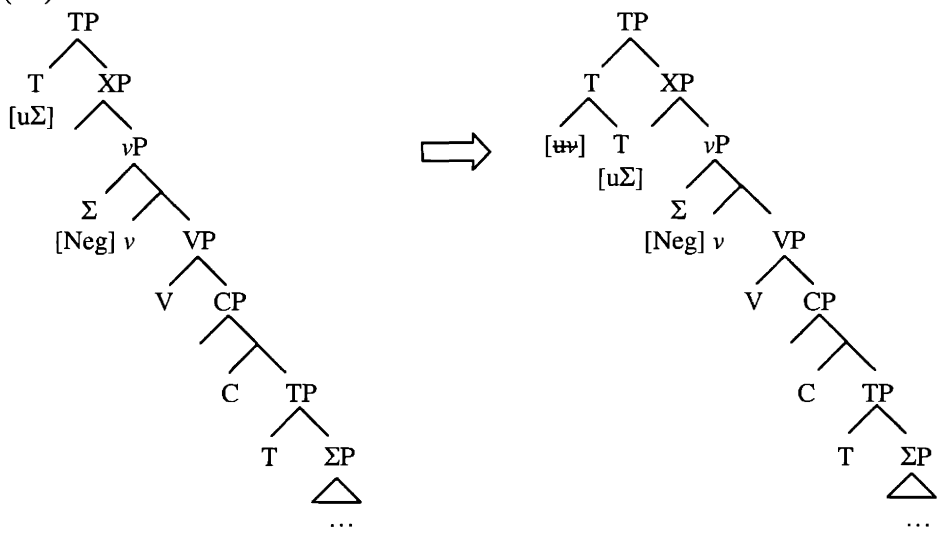


In Neg-raising contexts like (52), [Neg] occupies the specifier position of *v*P, while in constituent negation contexts like (54), [Neg] is adjoined to *v*P.

One avenue for exploration is the possibility that the representation should include an extra phrasal projection between T and *v*P. Though it is not immediately clear why an extra XP

should appear above v_{NR}, or what the identity of such a head should be, its presence is sufficient to derive *do*-support in NR as a consequence of failure of Structural Locality between T and *v*.

(56)



The motivation for the extra projection, XP, is the obligatory operation *do*-support in NR; further analysis is required to understand the provenance of the required head.

4.2.1.2 Neg-raising over scope-bearing elements

The preceding section outlined the explanation for the predicted absence of the NR reading with matrix [nɑt]. Several other cases in which the NR reading disappears deserve attention here, although they fall outside of the predictions of the analysis.

The first such case involves the presence of constituent negation in the matrix clause.

(57) Flap doesn't not believe Emma left.
a. 'It is not the case that Flap doubts that Emma left.'
b. *'Flap doubts that Emma didn't leave.'

It appears that the derivation in which [Neg] raises to matrix T from the lower clause is somehow ruled out if the head of subordinate ΣP crosses constituent negation.

Likewise, crossing over a matrix adverb eliminates the NR interpretation.

(58) Flap didn't always believe that Emma left.
a. 'It is not the case that Flap always believed that Emma left.'
b. *'Flap always believed that Emma didn't leave.'

The same is true for VP adverbs.

(59) Flap didn't completely believe that Emma left.
a. 'It is not the case that Flap completely believed that Emma left.'
b. *'Flap completely believed that Emma didn't leave.'

The restrictions in (58) and (59) do not represent a general incompatibility between adverbs and raised negation. When [Neg] raises to a matrix clause with an adverb, but doesn't cross over the adverb, the NR reading is available.

(60) Flap always didn't believe that Emma left. (...he thought she was abducted.)
'Flap always believed Emma didn't leave."

For the NR reading to be available at all, [Neg] may not raise over an adverb, but may raise to T modified by an adverb.

(61)
Janice: Why did I get an F on every single homework?
Prof. Flap: Because I always didn't think you were right. 'I always thought you weren't right.'
#Because I didn't always think you were right. *'I always thought you weren't right.'

The lack of the NR reading in movement over constituent negation and adverbs suggests that raising [Neg] over a scope-bearing element is disallowed. This generalization accounts for a further case in which an expected NR reading is absent. When the subordinate clause subject is quantificational, the NR reading is absent.

(62) Flap doesn't think everyone agrees with him.
a. 'It is not the case that Flap thinks everyone agrees with him.'
b. *'Flap thinks everyone doesn't agree with him.'

(63) Flap doesn't think Emma agrees with him.
a. 'It is not the case that Flap thinks Emma agrees with him.'
b. 'Flap thinks Emma doesn't agree with him.'

(64) Flap doesn't think everyone is here.
a. 'It is not the case that Flap thinks that everyone is here.'
b. *'Flap thinks that everyone isn't here.'

(65) Flap doesn't think Emma is here.
a. 'It is not the case that Flap thinks Emma is here.'
b. 'Flap thinks that Emma isn't here.'

An apparent exception to the generalization involves Neg-raising over scope-taking predicates like *be likely* or *be probable*.

(66) Butch doesn't think his bill will die in committee.
a. 'It's not the case Butch thinks his bill will die in committee.'
b. 'Butch thinks his bill will not die in committee.'

(67) Butch doesn't think it's probable his bill will die in committee.
a. "It's not the case that Butch thinks it's probably his will die in committee.'
b. 'Butch thinks its probable his bill will not die in committee.'

Recall, though, that both *likely* and *probably* are on Horn's list of Neg-raising predicates. In cases like (67), [Neg] can raise through, not over, the middle clause. *Possible*, which is scopal but is not among the Neg-raising predicates (see (68)), indeed disallows the NR reading (69).

(68) It isn't possible that bill will die in committee.
a. 'It is not the case that it's possible that bill will die in committee.'
b. *'It is possible that the bill won't die in committee.'

(69) Butch doesn't think it's possible his bill will die in committee.
a. "It's not the case that Butch thinks it's possible his will die in committee.'
b. *'Butch thinks its possible his bill will not die in committee.'

The final case in which the NR reading seems to disappear is in inversion.

(70) Flap doesn't believe that Emma left.
a. 'It isn't the case that Flap believes that Emma left.'
b. 'Flap believes Emma didn't leave.'

(71) Doesn't Flap believe that Emma left?
a. 'Isn't it the case that Flap believes that Emma left?
b. *'Is it the case that Flap believes Emma didn't leave?

However, this might follow from independent factors that affect the available meanings for negative questions. Consider (72), in which the speaker wonders why Flap did not attend a party held in an area inaccessible by public transportation.

(72) (Why didn't Flap come to the party?)
Doesn't he drive?
a. 'Isn't it the case that he drives?"
b. *'Is it the case that he doesn't drive?'

The missing interpretation in (71)b may be missing for the same reason (72)b is a strange interpretation. There are pragmatic constraints on the interpretation of [n̩t] that affect its interpretation that are orthogonal to the NR analysis (see Büring and Gunlogson (2000) and references therein). The apparent absence of an NR interpretation in (71)b is likely due to the

fact that a polar interrogative with [n̩t] does not typically function as an information seeking question.

4.2.2 Section summary

Clearly, the phenomenon of Neg-raising is profitably analyzed in terms of head movement of [Neg] from a subordinate clause ΣP to the T of a matrix clause that contains a Neg-raising predicate. Section 4.2.1.1. explains how the disappearance of the NR reading with [nɑt] falls out clearly as a consequence of the distribution of the sentential negation allomorphs. Section 4.2.1.2. discusses a number of less clear cases in which the NR reading is not available, and suggests a preliminary treatment by which the absence of an NR reading is due to the presence of scope-bearing elements between the base and target positions of [Neg].

4.3 Concluding Remarks

The English imperative proves to be a fruitful domain of inquiry into how to apportion explanations for patterns of grammaticality between the narrow syntax and the operations of the PF and LF interfaces. Recall that from a Minimalist perspective, linguistic expressions are pairings of sound and meaning EXP = <PHON, SEM> derived from a unique output of the computational system. This dissertation has explored constraints on these pairings that derive not from operations of the computational system but from the interactions of the LF and PF interfaces with the Output of the narrow syntax. Adjacency constraints over syntactic structures and syntactically conditioned allomorphy at PF yield specific insights into available phonological interpretations (PHON) of syntactic outputs. In addition, semantic compositionality itself at the LF component explains the unavailability of some <PHON, SEM> pairs otherwise generable by the syntax and provided with well-formed PHON realizations.

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