How to be Quiet*

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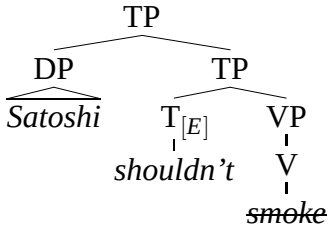
One job of the ellipsis theorist is to characterize the connection between the syntax of ellipsis and its semantics. And a central goal of that task is to explain where it is that ellipses are possible. The most thorough examination of what's involved in meeting this goal is probably Lobeck (1995), where it is proposed that heads with certain properties license the ellipsis of their complements. Merchant (2001, section 2.2.1) amends this proposal with an explicit characterization of the semantics of these heads which captures the semantic side of ellipsis. He suggests that the heads which license ellipsis of their complements have a feature, "E," whose meaning is (1).

(1) $[\![\text{E}]\!] = \lambda p.p$, where p is E-GIVEN.
α is E-GIVEN iff there is a salient β such that existential closure of β entails the existential closure of α and vice versa.

An instance of VP Ellipsis might have a syntax like that in (2) on this view.

(2) Kids smoke, but



E-GIVEN, an attenuated version of which is given here, expresses what Merchant argues is the antecedence condition on ellipsis. What (1) requires of (2), then, is that the VP T combines with have a salient antecedent. The question of characterizing where ellipses are possible then devolves to discovering where E can be found. With luck we might even come to understand how that distribution emerges from more fundamental properties of grammar. For instance, we would like to understand why ellipsis seems to be sensitive to morphosyntactic category. Projections

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of verbs, nouns and whatever heads sentences elide in English, but projections of prepositions, adverbs and adjectives do not.

I'm going to propose a different approach to these problems, but before doing so I want to advertise one important consequence of the Merchant and Lobeck proposals. Because complements must be phrases, their proposal predicts that only phrases can elide, heads can't. This certainly appears to be the case for VP Ellipsis.

(3) a. He [$_{VP}$made John laugh], and then she did Δ.
b. * He [$_{VP}$made John laugh], and then she did Δ cry.

(4) a. He [$_{VP}$turned the light off] before she did Δ.
b. * He [$_{VP}$turned the light off] after she did Δ on.

(5) a. She [$_{VP}$believes John to be happy], but he does Δ too.
b. * She [$_{VP}$believes John to be happy], and he does Δ to be sad.

There are the exceptions, of course, which constitute Levin (1986)'s "Pseudogapping" construction: (6) are examples.

(6) a. He [$_{VP}$made John happy], but he didn't Δ Sally.
b. She [$_{VP}$explained to John about natto], but she didn't Δ to Sally.

These exceptions, however, no doubt connect to the fact that DPs and PPs appear capable of getting outside of the VP, to judge from the criterion of "Heavy NP Shift"; see (7).

(7) a. He [$_{VP}$made laugh] the children who saw him try to jog.
b. She [$_{VP}$explained about natto] with apparent glee to anyone who dared to ask.

And so Pseudogapping too could be instances of phrasal ellipsis: phrases from which material has moved (see Jayaseelan (1990) and Lasnik (1999)). Indeed, the fact that there is no similar evidence that the complements in (3)-(5) can move out of the VP (see (8)) is a reason for restricting VP ellipsis to just phrases.

(8) a. * He [$_{VP}$made John] with apparent glee laugh till he split a gut.
b. * He [$_{VP}$turned the light] with obvious regret off.
c. * She [$_{VP}$believes John] with some reservations to be incredibly sanguine.

So far as I know, the other ellipsis processes could be similarly constrained. Sluicing certainly seems to be.

(9) a. She should meet someone nice, but who?
b. * She should meet someone nice, but who she ~~should~~ attractive

And, although harder to tell, "$\overline{\text{N}}$-ellipsis" seems similarly constrained.

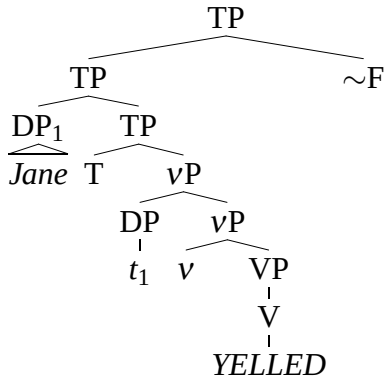
(10) a. John's slow search of the house compares only to Mary's Δ.
b. * John's slow search of the house compares only to Mary's Δ of the yard.

The generalization, then, that the Merchant and Lobeck proposals predict (and which nothing else that I know of does) is (11).

(11) NO DELETED HEADS CONSTRAINT
Ellipsis affects only phrases.

The alternative conception I would like to suggest here is built on Rooth (1985, 1992)'s ideas about interpreting focus. Rooth suggests that constituents which contain focus marked material have a silent anaphor appended to them that has the effect of triggering requirements on the discourse in which such a constituent is embedded. A sentence like *Jane* YELLED, for instance, gets the representation in (12), where ∼F represents Rooth's silent anaphor.

(12)

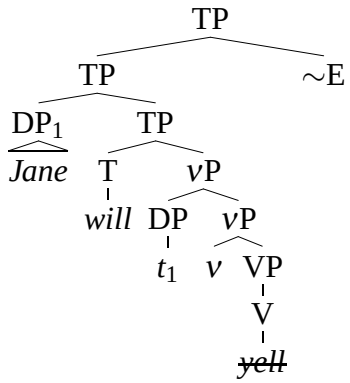


Rooth's suggestion about the meaning of F causes it to seek an antecedent in (12) of the form "Jane X," where "X" ranges over alternatives to *yelled*. Thus, for instance, this requirement would be satisfied if (12) were a rejoinder to "Didn't Jane whisper?" Informally:

(13) F seeks an antecedent A such that $[_A \ldots \text{X} \ldots]$ matches $[_P \ldots [_f \text{ Y }] \ldots]$ and X is a distinct alternative to Y, where P is F's sister and $[_f \text{ Y }]$ is focused material.

The antecedence conditions on ellipsis are different from those invoked by focus but we can still see the syntax as parallel. An example like *Jane will* gets the representation in (14), where ∼E represents an anaphor whose meaning is derived from the phrase it's attached to.

(14)



Imagine that the meaning of E causes it to seek an antecedent in (14) of the form "Jane X," where "X" characterizes what an appropriate antecedent for the ellipsis is. For instance, if we adopt Merchant's proposal for the antecedent conditions on ellipsis, we can informally describe E's meaning with (15).

(15) E seeks an antecedent A such that $[_A \ldots \text{X} \ldots]$ matches $[_P \ldots [_e \text{Y}] \ldots]$, where $[\![\text{Y}]\!]$ is e-given by $[\![\text{X}]\!]$, P is E's sister and $[_e \text{Y}]$ is deleted material.

This is how a Roothian syntax/semantics interface would work. The syntax/phonology interface involves a different mechanism. In the case of focus, what is required is a way of relating the focused material to the phonological reflex of focus which, in English, is pitch accent. Pitch accent is defined for words, so when phrases are focused there needs to be a means of determining which word will mark this with pitch accent. This is a many-to-one relation, as (16) demonstrates.

(16) a. Where did you go this week?
I went $[_f$ to Chicágo].

b. What did you do this week?
I $[_f$ went to Chicágo].

c. What happened last week?
$[_f$ I went to Chicágo].

In each case, the focused material in the reply provides the answer to the previous question. What (16) shows, then, is that pitch accent on *Chicago* is capable of marking focus on any of the phrases containing it. We can think of the f-marked phrase as a projection of this pitch-accented word, This notion of projection is different from that which syntactic operations seem to be sensitive to, as can be seen from (16). Let's call this *p-projection*,[1] to be distinguished from the more familiar $\overline{\text{X}}$ Theoretic *s-projection*.[2]

[1] For "phonological projection."
[2] For "syntactic projection."

An interesting feature of p-projections – one that will be exploited below – is that they are sensitive to Adjunct Islands.

(17) a. Why did Bush win?
He won [$_f$ because of some júdges].

b. What did Bush do in 2000?
* He [$_f$ won because of some júdges].

c. What happened in 2000?
* [$_f$ Bush won because of some júdges].

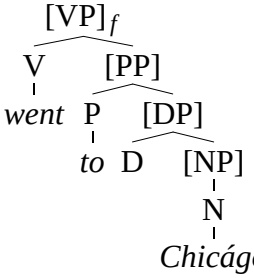
(18) a. What enraged the Boston Archbishop?
[$_f$ The prospect of married homoséxuals] enraged him.

b. What happened in Boston?
* [$_f$ The prospect of married homoséxuals enraged the Archbishop].

Very roughly following Selkirk (1996), we can express how p-projection works with (19).

(19) P-PROJECTION
α is p-projected from a head β iff:
a. α is the s-projection of β, or
b. β p-projects the complement of α.

For instance, the VP in (16b), *went to Chicago* can be f-marked because it is a p-projection of the pitch accented *Chicago*. (Phrases that are p-projections are enclosed in "[].")

(20)


As (20) makes clear, the algorithm in (19) produces a "path" of nodes above the f-head, any of which can be f-marked.

I will make a proposal intended to derive (19) that will target its central feature: the distinction between complements and non-complements. But before that, consider how this mechanism would look if it were imported to ellipsis.

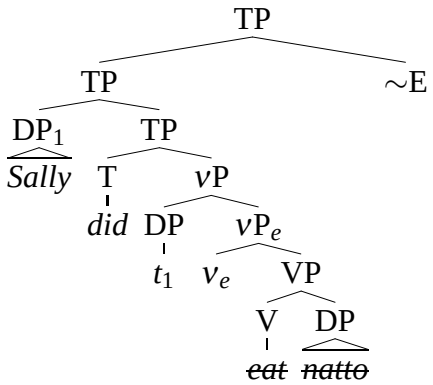
One way of viewing focus projection is as a process that projects a phonological property defined for words (pitch accent) onto phrases. I suggest we think

of ellipsis in the same way: as a projection of a phonological property defined for words (in this case: silence) onto phrases. Elided phrases, then, will be p-projections of words that have no phonetic content. Ellipsis, then, is a way of usurping a phonological property defined at the word level for a different means, forming a kind of anaphora. Focus projection, for all its differences, might be seen in the same way: a prosodic property of a word is exploited to signal a rather different kind of anaphora.

Because there are no phonetically silent verbs or nouns, there are no instances of VP or NP ellipsis. "VP Ellipsis," to which I will now restrict attention, I suggest is actually ellipsis of a phrase containing the VP which is headed by a phonetically empty word. In many cases, this could be v, which is thought to determine the external θ-role and/or define the type of event that the sentence refers to. On some proposals, this head is Aspect. I will equivocate between these ideas.

The proposal, then, is that an instance of "VP Ellipsis" like (21) has a representation like that shown, where "e" stands for the property of being silent.

(21) Jerry ate natto because

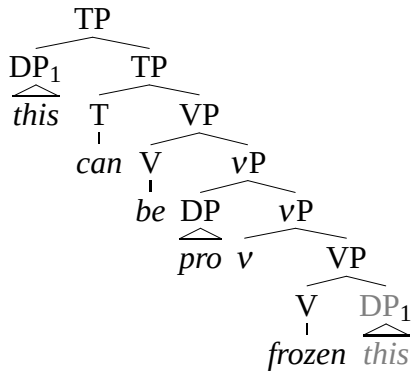


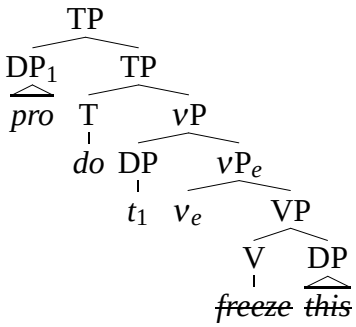
The NO DELETED HEADS CONSTRAINT now emerges by denying it wholesale. Verbs and Nouns don't "elide," because they are not silent; VPs and NPs do because they are complements to silent heads. The absence of AP, AdvP and PP ellipsis, then, might be traced back to the absence of a silent functional head in these phrases. Indeed, whereas there is considerable evidence for a silent functional projection introducing NPs and VPs, there is little parallel evidence for these other categories.

I will offer three phenomena that I suggest should be construed as evidence that vP, but not VP, can be elided.

The first involves situations where an elided "VP" and its antecedent differ in valency. Sometimes these situations are perfectly grammatical; at other times, they aren't. Sag (1976), and many subsequent authors, have noted for instance that passive VPs are legitimate antecedents for elided active ones – (22) is adapted from one of Sag's examples.[3]

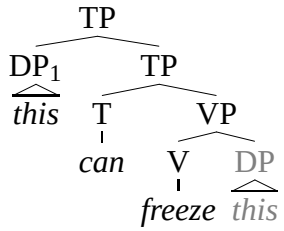
[3]I assume that there is an implicit agent of v in a passive – indicated here by "pro" – and that there

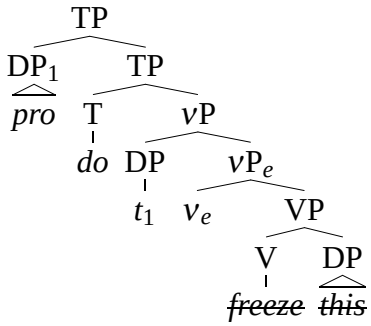
(22) 

. Please 

Interestingly, the active/passive alternation preserves the agent θ-role and action event structure (see Baker, Johnson, and Roberts (1989), among others), and therefore *v*P. A passive can act as antecedent to an elided active VP, on this account, because they both have *v*Ps that meet the antecedence conditions on ellipsis.

By contrast, the transitive/unaccusative alternation does not preserve the agent θ-role and action event structure. This indicates either that the unaccusative clause lacks the *v*P the transitive clause has, or that their *v*P/AspectPs are semantically different. In either case – (23) assumes the first scenario – the antecedence conditions on ellipsis will not be met on the assumption that *v*P, and not VP, elides.

(23) 

. *Please 

In general, contrasts of this sort indicate that it is not the root verb's meaning that determines when a "VP" may elide under antecedence with another. The proposal here is that this is because the meaning of a higher, silent, predicate is necessarily part of the elided phrase. If correct, this can be made to follow from the hypothesis that elided phrases are p-projections of silent heads.

The second piece of evidence for this thesis comes from a method of determining directly what the meaning of an elided "VP" is. This method uses the meanings that the modifier *again* invokes. What I will show is that elided "VP"s which are modified by *again* have a narrower range of meanings than do overt "VP"s mod-

is a similar implicit subject for imperatives. I also adopt the copy theory of movement: unpronounced copies are shaded.

ified by *again*. In particular, they don't have the meaning associated with VP, only that associated with *v*P.

When *again* modifies an overt transitive VP, (at least) two meanings are possible.

(24) She closed the door again.

a. She closed the door, and someone had closed it before.

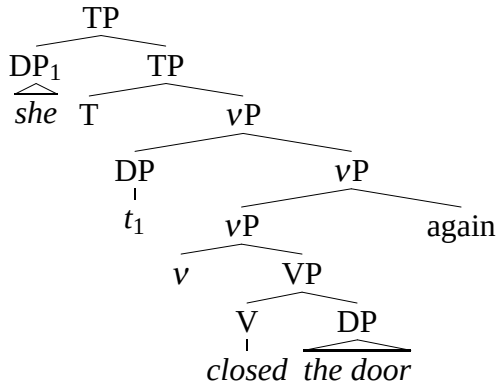
(repetitive reading)

b. She closed the door, and it had been in that state before.

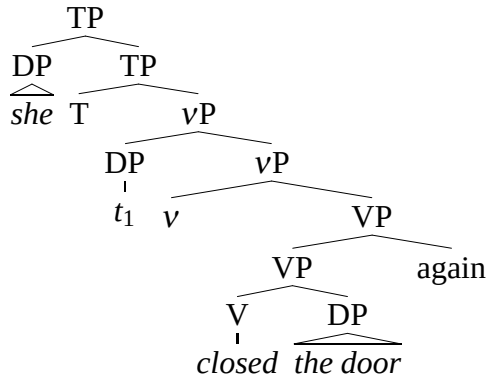
(restitutive reading)

Stechow (1996) and Rapp and Stechow (1999) argue that this is a syntactic ambiguity because it is sensitive to word order. Assume that *again* invokes a presupposition that the constituent it modifies has occurred previously. The repetitive reading arises then when *again* modifies a *v*P, on the assumption that *v*P denotes the action event which results in the state denoted by the verb. The restitutive reading, by contrast, arises when *again* modifies VP, under the assumption that the VP denotes the resulting state. The ambiguity in (24), then, corresponds to the structures in (25) and (26).

(25) (24a)=



(26) (24b)=



See the Stechow and Rapp papers for details.

The central difference in the readings is whether or not the action of opening the door is presupposed or not. In a context in which that presupposition is salient, as in (27), the repetitive reading is favored.

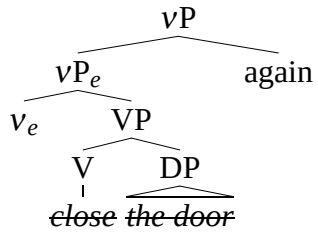
(27) Jane closed the door, and then Maribel closed it again.

But in contexts where that presupposition is blocked, as in (28), the restitutive reading becomes available.

(28) The wind blew the door open, and no one closed it. Finally, Maribel closed it again.

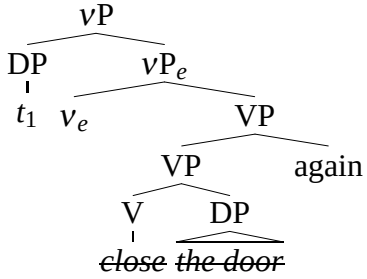
Elided "VPs" support the repetitive reading, as (29) indicates.

(29) Jane closed the door, and then Maribel did



But they don't support the restitutive reading, as the badness of (30) suggests.

(30) The wind blew the door open and no one closed it.
Finally, *Maribel$_1$ did



This is just what's expected if VP ellipsis must elide *v*P, for then the only way *again* could be stranded by the ellipsis is if it modified something larger than VP.

The final piece of evidence for this proposal is less direct. It involves a puzzling effect that VP ellipsis has on island effects. Sag (1976) was misled into thinking that extraction from elided VPs was always ungrammatical, and indeed this is almost the case. So far as I've been able to tell, only complements to the elided VP may be extracted. Complements for example, normally not islands, become islands when they are within elided VPs. (See Lasnik (2001), Fox and Lasnik (2003) and Merchant (forthcoming).)

(31) a. * Sheila said they spoke a Balkan language, but I don't know what Abby did Δ. (Δ = said they spoke *t*)

b. Sheila said they spoke a Balkan language, but I don't know what Abby said they spoke.

(32) a. * Sheila bought a book about someone, but I don't know who Abby did Δ. (Δ = bought a book about *t*)

b. Sheila bought a book about someone, but I don't know who Abby bought a book about.

We saw in focus projection that p-projections interact with island effects. I will show that the island effect created by VP ellipsis can be seen as a product of this interaction, but only if we think of ellipsis as involving p-projections.

We must make a digression, then, to see why focus projection should be subject to "Adjunct Islands." I'll assume that these islands reflect a constraint which also prevents movement from non-complements, and is responsible for the contrasts in (33)-(35).

(33) a. What did you say [that Jerry bought t]?

b. ?? What did you sleep [after Jerry bought t]?

(34) a. Who did you talk [to t]?

b. ?? What did you dance [after t]?

(35) a. Who did Betsy paint [a picture of t]?

b. * Who did [a picture of t] bother Betsy?

We should understand why this island for extraction that also constrains focus projection. We seek a theory of adjunct islands which destructively interacts with the algorithm producing p-projections as well as movement.

I will assume that what distinguishes complements from non-complements is wholly representational. Only complements are allowed to be sisters to heads (see Chomsky (1981)). We seek, then, an explanation for (36).

(36) A phrase is an island for movement and p-projection if it:

a. isn't adjoined to an X^0, and

b. doesn't s-project.

I'll follow suggestions in Chomsky (2001) and Uriagereka (1999) and strive to make (36) follow from the method by which phrase-markers are assembled and interpreted by the phonological component. Let's take as a starting point the "Bare Phrase Structure" algorithm for tree construction which builds a phrase marker from a collection of lexical items – I'll call this a Numeration – by grouping them into binary, non-linearized, phrases.

(37) a. The NUMERATION ($\mathcal{N}$) begins with the set of terminal items that will build the phrase marker.

b. MERGE(α)(β) = $\{_\gamma\alpha, \beta\}$, α, β and $\gamma \in \mathcal{N}$.
"$\{_\gamma\alpha, \beta\}$" signifies that α and β are sisters and daughters of γ.

c. Repeat MERGE until $\mathcal{N}$ has just one member.

The vP *I flew to Chicago*, for example, would be constructed by the derivation in (38).

(38) i. $\mathcal{N}$ = {I, v, flew, to, Chicago }

ii. $\mathcal{N}$ = {I, v, flew, {$_\gamma$to, Chicago}, this, week}

iii. $\mathcal{N}$ = {I, v, flew, {$_\gamma$to, Chicago}, {$_\gamma$this, week} }

iv. $\mathcal{N}$ = {I, v, {$_\gamma$flew, {$_\gamma$to, Chicago}}, {$_\gamma$this, week} }

v. $\mathcal{N}$ = {I, {$_\gamma v$, {{$_\gamma$flew, {$_\gamma$to, Chicago}}}, {$_\gamma$this, week} }

vi. $\mathcal{N}$ = {I, {$_\gamma${$_\gamma v$, {{$_\gamma$flew, {$_\gamma$to, Chicago}}}, {$_\gamma$this, week}} }

vii. $\mathcal{N}$ = {{$_\gamma$I, {$_\gamma${$_\gamma v$, {{$_\gamma$flew, {$_\gamma$to, Chicago}}}, {$_\gamma$this, week}}}}

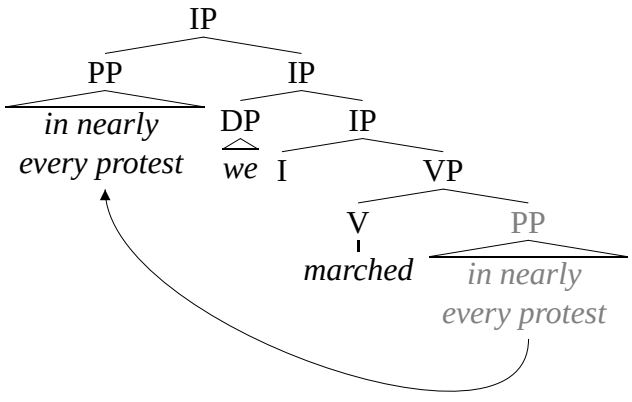
= an unlinearized "I flew to Chicago this week."

To guarantee that arguments are positioned closer to X^0s than are non-arguments, this algorithm is steered so that (39) emerges.

(39) If α^0 merges with a phrase, β, then β must be α's argument.

Assume that MERGE also plays a role in movement phenomena – adjoining a copy of the movement target to its landing site, as, for instance, in cases of topicalization such as (40).

(40)



There is a certain asymmetry to MERGE in this application that is not apparent in its function as tree builder. MERGE adjoins one term (the moved item) to another. From our perspective, an interesting aspect to this asymmetry is that it is the host of

the adjunction that s-projects. As part of unifying these two applications of MERGE, I suggest importing this asymmetry into the tree-building application.

I propose to modify Chomsky's algorithm to (41).

(41) a. $\mathscr{N}$ begins with the set of terminal items that will build the sentence.
b. SELECT removes one item from $\mathscr{N}$, let us call this, or whatever constitutes the maximal phrase created from this item, "the host."
c. MERGE(α)(β) forms $\{_\gamma \alpha, \beta\}$, where either α or β is the host.
d. RENUMERATE places $\{_\gamma \alpha, \beta\}$ into $\mathscr{N}$.
e. Terminate when $\mathscr{N}$ has one member.

SELECT is responsible for determining the asymmetry. Unlike Chomsky's algorithm, (41) also fixes the value of the phrases it constructs along the way. Further, (41) separates MERGE from the operation that repatriates phrases into $\mathscr{N}$ (a process I'll call RENUMERATION). This allows MERGE to apply iteratively to the material containing the host without renumerating all of its parts. Which parts get renumerated and which don't is going to be a function of (39) and the s-projection Rules, which determine the value of the phrases that are being built.

The s-projection rules have the consequences described in (42).

(42) S-PROJECTION RULES
In $\{_\gamma \alpha, \beta\}$,
i. If just one of α and β is a phrase, then make γ an s-projection of the non-phrase;
ii. If both α and β are phrases, then make γ an s-projection of the host.

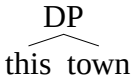
These s-projection rules encode not only that it is the phrase containing the host which projects in movement contexts, but also the standard generalization that it is the X^0 daughter of some phrase that projects.

I have tried to do nothing new here. I've merely taken a method of defining phrase marker trees that is procedural, and expressed three widely believed constraints on these phrases markers: that only complements can be merged with heads, that heads project and that when one phrase adjoins to another, it is the host that projects. I've engineered this, however, in a way that stages the construction of phrase markers so that the distinctions needed to capture adjunct islands are produced. This can be demonstrated by considering a few derivations.

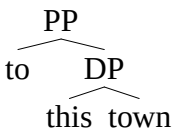
Consider first how this procedure can construct a vP whose VP contains a complement. We'll start with v, the verb and the ingredients of the complement, as in (43), and then SELECT out one of these terms which will act as host to iterative applications of MERGE.

(43) $\mathcal{N}$ = {*v*, flew, to, this, town}

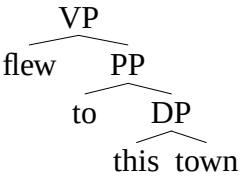
(44) a. **Select:** town $\mathcal{N}$ = {*v*, flew, to, this}

b. **Merge:** 

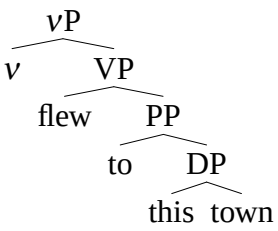
$\mathcal{N}$ = {*v*, flew, to}

c. **Merge:** 

$\mathcal{N}$ = {*v*, flew}

d. **Merge:** 

$\mathcal{N}$ = {*v*}

e. **Merge:** 

$\mathcal{N}$ = { }

Note that with each application of MERGE, except the first, the s-projection rules have determined what the resulting phrase is. So, for instance, in step (44c) merging *to* onto the determiner phrase *this town* results in an s-projection of *to*. This is because in this case, an X^0 is joining with a phrase, and the s-projection rules insist in that instance that the X^0 s-projects. And so it goes in all of the other cases of MERGE in (44). In each case the outcome is the expected, and grammatical, one.

Notice how this derivation has built a *v*P "from" a noun within its complement. It mimics the p-projection path that we are trying to characterize. Indeed, this is the thesis I want to defend:

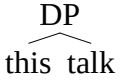
(45) p-projections are the phrases that MERGE builds.

Compare now how a similar phrase is constructed in which the PP is not an argument of the verb, but an adjunct instead, as in *flew after this talk*. Although this can start with a Numeration that looks superficially like (43), it will not be able to precede in the same manner, iteratively adjoining terms to a host that is drawn from within the adjunct PP. There are two conceivable ways in which such a derivation could go, and each is blocked by a different constraint on the procedure. In one derivation, which mimics (44), a violation of (39) will ensue at the point at which the verb is merged to the PP.

(46) $\mathcal{N}$ = {*v*, flew, after, this, talk}

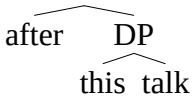
(47) a. **Select:** talk $\mathcal{N}$ = {*v*, flew, after, this}

b. **Merge:**



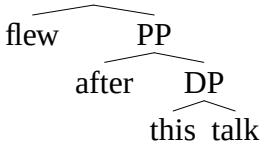
$\mathcal{N}$ = {*v*, flew, after}

c. **Merge:**



$\mathcal{N}$ = {*v*, flew}

d. ***Merge:**



$\mathcal{N}$ = {*v*}

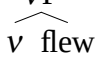
This derivation, in other words, violates the central assumption of this paper: that non-arguments cannot be sisters to heads.

The other derivation to consider is one in which the verb phrase to which the adjunct PP will be joined is built up first and then later MERGed onto a host drawn from within the PP. This derivation is illustrated by (49), and it dies because of the action of the s-projection rules.

(48) $\mathcal{N}$ = {*v*, flew, after, this, talk}

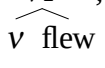
(49) a. **Select:** *v* $\mathcal{N}$ = {flew, after, this, talk}

b. **Merge:**

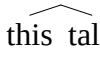


$\mathcal{N}$ = {after, this, talk}

c. **Renumerate:** $\mathcal{N}$ = {  , after, this, talk}

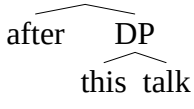
d. **Select:** talk $\mathcal{N}$ = {  , after, this }

e. **Merge:**

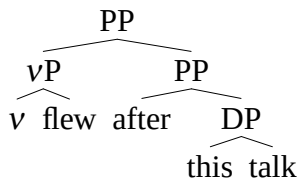


$\mathcal{N}$ = {  , after }

f. **Merge:**



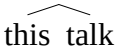
$\mathcal{N}$ = {  }

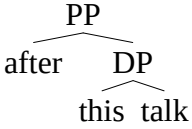
g. ***Merge:**  $\mathcal{N}$ = { }

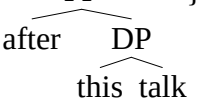
The s-projection rules require, as indicated, that it is the adjunct PP which s-projects in step (49g), and this forms a PP which does not conform to a well-formedness condition on PPs in English. (Namely: a PP cannot begin with a VP.)

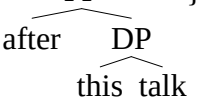
Instead of these two derivations, the one that is permitted by (41) is one in which, like (50), the adjunct is built up first and then later MERGed onto the verb phrase.

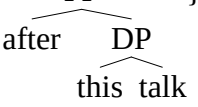
(50) a. **Select:** talk $\mathcal{N}$ = {*v*, flew, after, this}

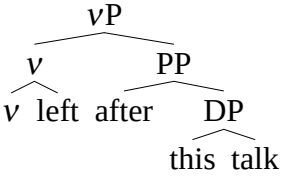
b. **Merge:**  $\mathcal{N}$ = {*v*, left, after }

c. **Merge:**  $\mathcal{N}$ = {*v*, left}

d. **Renumerate:** $\mathcal{N}$ = {*v*, left,  }

e. **Select:** *v* $\mathcal{N}$ = {left,  }

f. **Merge:**  $\mathcal{N}$ = {  }

g. **Merge:**  $\mathcal{N}$ = { }

The generalization to be learned from these examples is (51).

(51) Non-complements must be RENUMERATED, but complements need not be.

This is how the tree building algorithm in (41) makes the complement/non-complement distinction that is a prerequisite to understanding the island effect. What's left is to understand, then, why RENUMERATION produces islands for movement and p-projections.

If we are to be guided by the fact that p-projections are susceptible to this island, it seems sensible to imagine that we are facing an island that is defined for the syntax-to-phonology interface. In particular, let's hypothesize (52).

(52) Elements in the Numeration get their syntax-to-phonology values fixed.

(52) is a variety of the "cyclic Spell Out" hypothesis that is found in much current literature.[4] I intend it to mean that every item that is entered into the Numeration becomes subject to the procedures which govern the syntax-to-phonology mapping, and the relations those procedures establish become fixed. If the syntax-to-phonology mapping includes the two procedures in (53), the islandhood of adjuncts is derived.

(53) SYNTAX-TO-PHONOLOGY MAPPINGS

a. Let any p-projection of an α-head be α-marked, where α is e or f.

b. Linearize terminals.

Because adjuncts must be RENUMERATED, any f-headed host they contain will f-mark nothing larger than that adjunct. This derives the fact that f-projections cannot escape adjuncts. Similarly, the fact that adjuncts must be RENUMERATED will force the terminals within them to be linearized inside that adjunct. This will prevent movement from giving any of these terminals a new position outside that adjunct. In this way the fact that adjuncts are islands for movement is also derived.

This ends the aside: we now have an account for adjunct islands that explains why they should have the effect they do on p-projections. I will now show how this account can be exploited to explain why VP ellipsis has the effect of making complements contained within the elided VP an island. This will emerge as an interaction of the account just given for adjunct islands and the central proposal of this paper, that elided phrases are p-projections of silent words. This will be the final piece of evidence, then, for this hypothesis.

The interaction that derives this effect hinges on the fact that under the island account just offered, if XP is dominated by YP, then XP will be an island unless YP is p-projected from XP. This can be illustrated by considering the situation that obtains when a verb has two potential complements. If phrase markers are binary branching, only one of two potential complements can reside in complement position; the other will have to be an island. This looks incompatible with the

[4] See Chomsky (2001) and the articles in Epstein and Hornstein (1999), for example.

commonplace observation that either of two complements is transparent for both movement and f-projection:[5]

(54) a. What did you do last night?
I [$_f$ read a bóok to someone].

b. What did you do last night?
I [$_f$ read something to my dáughter].

(55) a. What did you read a book about **t** to my friend?

b. Who did you read it to a friend of **t**?

As it presently stands, however, there is no direct problem from these examples. Because (39) allows either one of two complements to be MERGED with the verb, there are derivations for either one of these cases. What would be problematic is if neither of these complements were islands at the same time. That is very hard to test when considering $\overline{\text{A}}$-movement, at least in English, as multiple $\overline{\text{A}}$-movement out of a VP typically results in ungrammaticality for (plausibly) other reasons. But we could, presumably, test this prediction in contexts where $\overline{\text{A}}$-movement is combined with f-projection.

Consider, for example, a situation in which a father is sharing with his child a bedtime storybook filled with interesting pictures. We might hear an exchange like that in (56).[6]

(56) a. Dad: Let's see what the mouse did in this picture.
What did the mouse [$_f$ give to the cát]?

b. Child: a book about cat-food!

c. Dad: What did the mouse [$_f$ read to the giráffe]?

d. Child: a book about trees!

As indicated, each of father's questions involve a focus-marked VP, and an object DP has moved out of these VPs to form the question. In each case, note, the focus marking on the VP is signaled by pitch accent within the complement PP. These sentences, then, have the ingredients we are in need of.

What we should expect is a contrast between (56) and a parallel situation in which the wh-phrase moves out of an object. If the method of deriving the adjunct

[5] I'm doing considerable violence to the complexity of these situations. In (54), I've forced accent onto one or the other of complements by making the non-accented complement something that doesn't allow focus projection from. If both complements are chosen fairly, then there is a preference for pitch accent to fall on the second of the two. I believe this reflects a preference for placing the second object in complement position.

[6] There may well be secondary stress on the verbs, as there often is for f-marked VPs that are p-projections of one of their complements.

condition proposed in this paper is correct, this scenario should force either the direct object or the indirect object to be an island, consequently blocking either focus projection or movement. This does indeed seem to be the case. Compare (56) with (57).

(57) a. Dad: Let's see what the mouse did in this picture.
∗What did the mouse [$_f$ give a book about to the cát]?

b. Child: cat-food!

c. * Dad: What did the mouse [$_f$ read a book about to the giráffe]?

d. Child: trees!

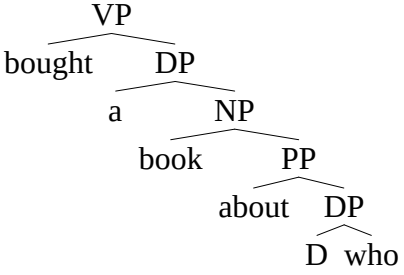
Instead, pitch accent is required in additional places for these questions to be uttered correctly. I think at least the noun of the direct object needs pitch accent, and the main verb may as well. What goes wrong in (57), then, is that the VP is a p-projection of a word in one complement, but movement is attempted out of the other. As noted above, this is prevented under that account of islands offered here.

This is what derives the fact that movement out of elided VPs triggers island effects. Because elided "VPs" are p-projections of v, the derivation required for building a vP will RENUMERATE VP, causing it to be an island. For instance, to derive the second clause of (32a), repeated here, will require starting with the Numeration in (58a), building the VP in (58b), renumerating that VP and starting to build the vP as shown in (58c).

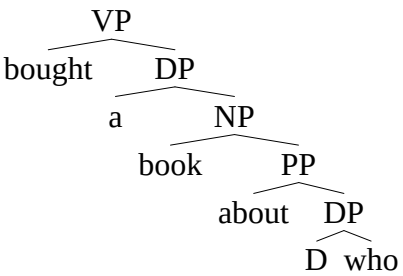
(32) * Sheila bought a book about someone, but I don't know who Abby did Δ.
Δ = bought a book about *t*

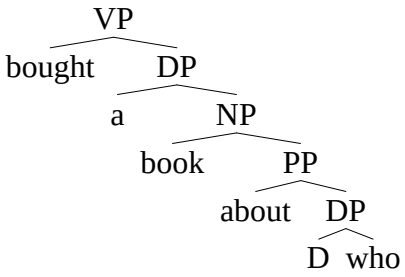
(58) a. $\mathcal{N}$ = {v_e, bought, a, book, about, D, who}

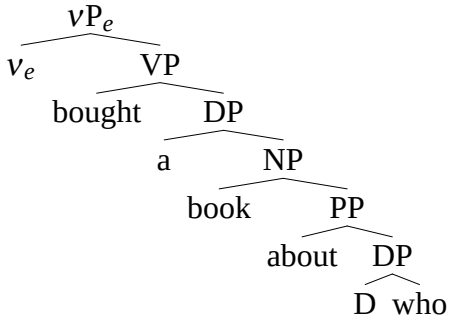
b. **6 applications of Merge:** $\mathcal{N}$ = {v_e }



c. **Renumerate:** $\mathcal{N}$ = {v_e, }



d. **Select:** v_e $\mathscr{N}$ = {  }

e. **Merge:** 

The step in (58c) makes the VP an island.

Seeing "VP" ellipsis as the result of p-projecting v therefore derives the relative difficulty of extracting from elided VPs, once it's coupled with the analysis of adjunct islands offered here. In fact, what is derived is that elided VPs should be complete islands for extraction, and this appears to be too strong. As noted earlier, complements do seem capable of moving out of elided VPs. This is what produces pseudogaps such as (6) & (7), as well as examples like (59).

(59) What has Bush done and what hasn't he Δ?

I don't see how to weaken what I've proposed here to admit these cases, and so I tentatively suggest that a non-movement account of them be found. If that should fail, then the relative resistance to extraction that elided VPs display cannot be taken as evidence for seeing ellipsis as phonological projections of silent words, and the first two pieces of evidence for this proposal will be all that remain of this paper.

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