Deletion Versus Pro-Forms: An Overly Simple Dichotomy?*

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In the course of writing this paper, I learned that C.L. Baker had written on this topic (he is in the bibliography). Baker, known to his friends as "Lee", of which I am proud to have counted myself as one, passed away tragically in April of 1997. He was an exceptionally fine human being and a fine syntactician, and I would like to dedicate this paper to his memory.

Abstract:

This paper examines an anaphoric construction, British English *do*, and locates it within the dichotomy in the ellipsis literature between deleted phrases and null pro-forms, concluding that the choice is a false one, in that pro-forms involve deletion as well; the question, then, is how to account for the differential permeability to dependencies that require external licensing of the various deleted constituents. British English *do* has some characteristics of a fully deleted phrase, and some of a pro-form. The paper proposes that deletion is involved in this construction, but of a smaller constituent than can host wh-movement or long quantifier-raising. Therefore, deletion must occur within the syntax, in order to bleed syntactic processes. It is further shown that, within a phase-based syntax, Voice must be a phase rather than v, but that both functional heads must exist, and offers a new explanation for the incompatibility of passive and British English *do*, as well as an account of why some languages, like English, lack impersonal passives, while others, such as Dutch, allow them.

Deletion Versus Pro-Forms: An Overly Simple Dichotomy

1.Introduction

A common distinction in the literature on ellipsis is the distinction between null phrasal elements whose contents have been deleted, and null elements that have the status of pro-forms.[1] The distinction between anaphora that involves deletion and anaphora that simply involves pro-form resolution, much discussed by Hankamer & Sag 1976, can be seen in the distinct characteristics of two anaphoric constructions: (i) VP-ellipsis, thought to involve deletion; and (ii) *do it* anaphora, thought to be a pro-form. Examples of both are given in (1):

(1a) John will visit Sally, and Fred will___too.

(b) John will visit Sally, and Fred will do it, too.

This distinction correlates with the way in which the construction interacts with processes that require internal structure for unpronounced material. For example, if we assume that wh-movement of an object occurs, so that a wh-phrase interpreted as an object must have originated within the verb phrase, we must posit at least enough internal structure to originally house the wh-phrase. An example is given in (2):

(2) Although I don't know who John will visit, I do know who Fred will___.

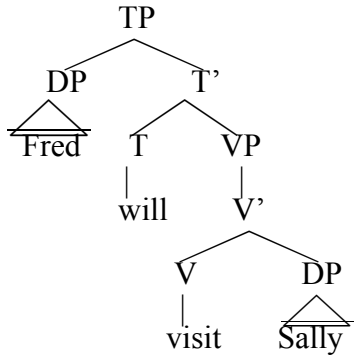
By contrast, a VP that is anaphorically expressed as *do it* cannot co-occur with such a wh-phrase, as in (3):

(3)*Although I don't know who John will visit, I do know who Fred will do it__.

These differences can be accounted for if we take a null VP to originally contain the lexical material that corresponds to its antecedent, but take the *do it* VP to have less structure-simply the main verb *do* and the proform *it*. Hence, the underlying structures of the second conjuncts of (1a) and (1b) (irrelevant details suppressed) will be (4a) and (4b), respectively:

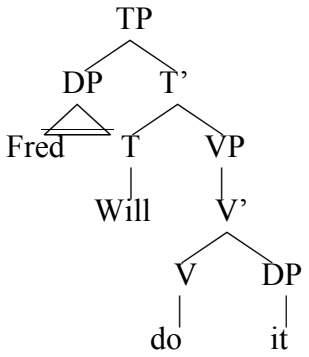
(4)

(a)



[1] Lucid recent discussions of this distinction, and its import, can be found in Johnson 2001 and Kennedy 2003.

(b)



In other words, a deletion site starts with all of the material normally dominated by the overt counterpart of a node, but this material is then eliminated;[2] a pro-form, by contrast, is a sort of "gestalt", with a syntactically simple element whose content is, while possibly supplied by the semantics as complex, simply the anaphoric lexical item itself, throughout the entire derivation.

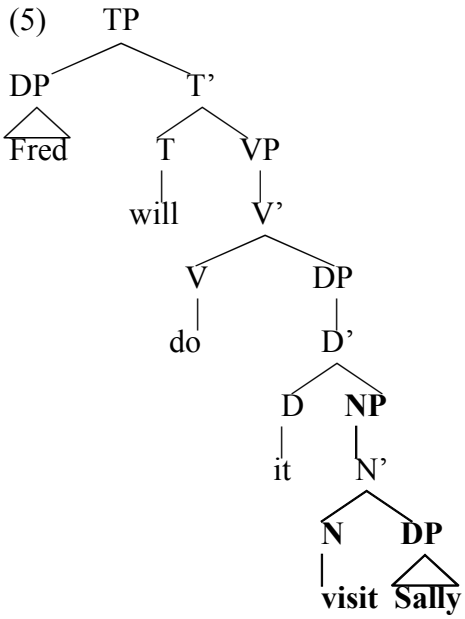
It seems, then, that this dichotomy, pervasive in the literature, makes two simple predictions: (i) If an anaphoric construction shows evidence of internal structure, then the construction involves deletion of a phrasal node; (ii) If an anaphoric construction does not show evidence of internal structure, then the construction is simply a pro-form, possibly but not necessarily null.

Logically, however, this distinction has been muddied in recent years, notably but not exclusively by Elbourne 2005, who has proposed, following Postal 1969, that pronouns involve deletion. The Postal-Elbourne analysis takes pronouns to be determiners whose NP complements have been deleted. Therefore, a more accurate representation of (4b) would be (5):[3]

[2] We will soon clarify what it means to eliminate this material. I am assuming that the deleted complement is an N, following Hale & Keyser 1993, but nothing essential turns on this.

[3] For expository purposes, deleted material in phrase-markers will be indicated by bolding.

(5)



If this is the case, the deleted NP complement should, all things being equal, have enough internal structure to host, for example, a wh-trace (i.e., in this case, in the position of *Sally*). It would seem, then, that the pro-form analysis does not slice the empirical cake finely enough.

I will assume the deletion analysis of pro-nouns, generalizing it to take a pro-form to be a functional head whose complement is deleted, and showing that in certain cases, the deleted complement can host a trace. One implication of my analysis will be the blurring, perhaps the obliteration, of an intrinsic distinction between deletion and pro-forms. The two cornerstones of my analysis can be summed up by these two dictums:

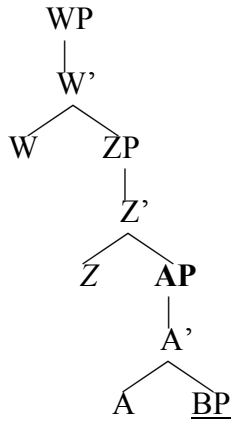
A.Size matters.

B. Timing is everything.

By Dictum A, I mean that deletion can target constituents of different sizes within the structure, and deletion of a constituent can render any element within that constituent incapable of participating in any formal relations.[4] By Dictum B, I take and defend a rather particular view of deletion, which differs from the received view of deletion. Specifically, I take deletion to apply in the overt syntax, much earlier than other proponents of deletion (such as Merchant 2001), who take it to apply at PF. Consider a structure with the characteristics of (6):

[4] Dechaine & Wiltschko 2002 argue, persuasively in my view, that languages differ in the size of the pro-forms, with some being D, some being (in their view) N, and some being a projection intermediate between D and N. An N pro-form, then (Japanese would be a case in point), would be a true pro-form, since there would be no complement that could have plausibly been deleted. While I agree with their general thrust, I am skeptical, partially for reasons given in Elbourne 2005, that the Japanese forms are truly N; rather, I suspect that the forms that they take to be N, *kare* (he) and *kanozyo* (she), are actually classifiers. This matter is taken up in more detail in Baltin & Van Craenenbroeck (in preparation).

(6)



Let us indicate deletion by bolding, in which case AP is the phrase that deletes. AP, however, dominates BP, and if BP would otherwise participate in a formal relation with W (i.e. having to move to W's Spec in order to check one of W's features, or having to agree with W), deletion of AP will remove the formal features of AP and everything that AP dominates, rendering BP ineligible for participation in this formal relation. If Z is the head that checks a feature on BP, this will be possible. All will be explained in due course, and will be due to the timing of AP's deletion.

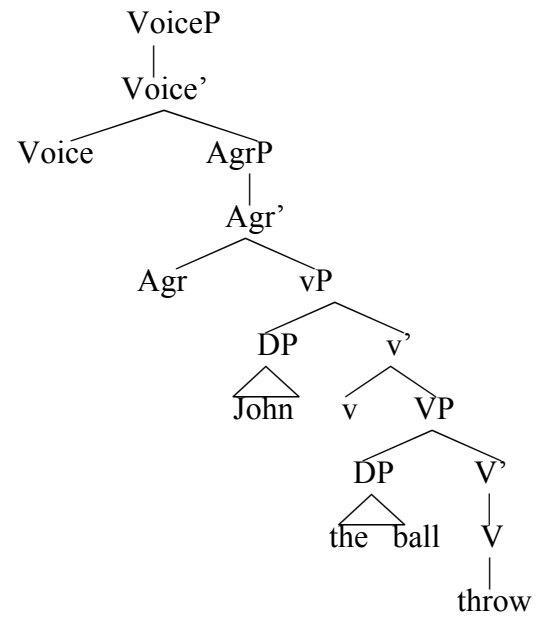
This theory will be empirically supported by an in-depth analysis of the British English *do* construction, which shows some evidence of internal structure, but also fails to exhibit internal structure in other respects where it would be expected to exhibit such structure.

After documenting a case of mixed evidence for internal structure, I will develop an analysis, originally suggested to me by Chris Collins, that relies on deletion of smaller constituents than will allow the extractions that evidence internal structure for larger constituents; the size of the deletion site will be shown to affect extraction possibilities.

A deletion analysis for British English *do* requires taking some particular, occasionally controversial, stands on a number of current issues in syntactic theory. Specifically, the parts of the analysis that I see as crucial, and which will be supported independently where possible, or at least shown not to be contradicted by other considerations, are the following: (i) deletion does not occur at PF, pace Fox 2000, Merchant 2001, and Fox and Lasnik 2003, but in the syntax; (ii) there is a Voice-head in the middle field, as argued originally by Kratzer 1996, but this Voice-head is structurally superior to, rather than identified with, v;[5] and, finally, (iii) the clause-internal phase is not vP, as argued by Chomsky 2000, but rather VoiceP. [6] Hence, the clause structure that I will adopt for the clause-internal phase is actually (7):[7]

[5]For other arguments for the positing of both Voice and v, see Collins 2005 and Merchant 2007.
[6]See Chomsky 2000 for an explication of this notion
[7]I realize that the status of Agr is somewhat controversial (see Chomsky1995a). I am using the term for expository purposes, and will discuss the need for such a projection later in the paper.

(7)



The roadmap of the presentation will first take us to the characteristics of British English *do* (Section 2), discussing the ways in which it does and does not evidence internal structure,Section 3 proposes a theory of deletion and the relation of syntax and semantics that is necessary for this theory of deletion, and provides some considerations for this theory's plausibility.Section 4 applies this theory to the facts of British English do that have been enumerated in Section 2, as well as pseudo-gapping and VP-ellipsis. Section 5 answers the question of why the deletion in British English *do* is obligatory, while other types of ellipsis are generally optional. Section 6 concludes.

With all of this, there is an appendix, justifying my omission of *do so* within the body of the paper proper, and some remarks on a possible analysis of *do so* that brings it into line with British English *do*'s analysis, and distinguishes it where appropriate.

With respect to the phrase-markers in this paper, I will be assuming a "bare phrase-structure" approach, as proposed in Chomsky 1995b, which eschews as a theoretical matter bar-levels and nodes that simply represent categorial features, but represents them in phrase-markers simply as a matter of expository convenience.

2.Central Phenomena To Be Explained

An example of British English *do* is given in (8)(a), which is synonymous with (8)(b):

(8)
(a) John will visit Sally, and Fred will do____too.
(b) John will visit Sally, and Fred will____too.

C.L.Baker 1984, following Pullum & Wilson1977, takes the British English *do* construction to be a variant of VP-ellipsis. While I believe that these scholars are on the right track, it leaves some unanswered questions, chief among which is the categorial status of *do*.

Haddican 2007proposes that *do* is actually v. Because v takes a VP complement, there is a VP at some point that follows the *do*, either null (in which case it remains as a null element) or deleted. *Do* is not replacing a phrasal complement; instead, the phrasal constituent (VP) follows *do* as its complement. We will now examine the evidence for internal structure for this VP.

2.1. Extraction

If the deletion of the VP in British English *do* is the same process as the deletion of the VP in traditional VP-ellipsis, we predict that whatever is elided in British English *do* shows the same porousness with respect to extractions as does traditional VP-ellipsis. When we look closely at extraction possibilities, we see that the record is mixed. Let us now test this prediction:

2.1.1. Wh-traces

It is well-known that wh-traces can be permitted within a VP-ellipsis site:[8]

(9) Although we don't know what John read, we do know what Fred did___.

Mysteriously, however, British English *do* is incompatible with any wh-traces, even the ones that are compatible with VP-ellipsis sites:

(10) *Although we don't know what John might read, we do know what Fred might do___.

Haddican 2007 cites Chalcraft 2006 for the observation that topicalization is also impossible with British English *do*:

(11)* Hazelnuts, I like; peanuts, I don't do__.

Again, the VP-ellipsis variant is fine:

(12) Hazelnuts, I like; peanuts, I don't___.

2.1.2. Inverse Scope

I will discuss the analysis of quantifier scope in Section 4, but for now, I would note a salient difference between quantifier scope in the VP-ellipsis construction, and quantifier scope in the British English *do* construction: an object quantifier can scope over a subject quantifier in the former construction, but not the latter construction.

(13) Some man will read every book, and some woman will ____too. (inverse scope possible).

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[8] Although space does not permit me to develop this point here, I believe that the extent of *wh*-traces within VP-ellipsis sites is vastly overstated. For example, the trace of a *wh*-AP cannot occur within a VP-ellipsis site, according to my judgements and those of my informants:

(i) *Although we know how angry John became, we don't know how angry Bill did___.

The distinction does not seem to be that wh-DPs are acceptable in ellipsis sites, while other types of wh-constituents are unacceptable. *When* and *where* seem much more acceptable than (i):Although we don't know when John left, we know when Bill did___.

(ii) Although we don't know where John put the crayons, we do know where Bill did___.

I suspect that the difference lies in the fact that *who*, *where*, and *when* have corresponding pro-forms (*he/she,, there*, and *then*) while APs do not. Baltin forthcoming develops this idea, and discusses its implications for the view of ellipsis as PF-deletion.

(14) Some man will read every book, and some woman will do__too. (inverse scope impossible; only direct scope possible).

Additionally, speakers of this dialect report a contrast between (15) and (16), with (15) being totally acceptable, and (16), in the words of one speaker, being "degraded":

(15) John couldn't read many books, and Bill couldn't either, but the many books that they could read were classics.

*(16) John couldn't read many books, and Bill couldn't do either, but the many books that they could read were classics.

Notice that the context forces a wide-scope, or inverse-scope, reading for the object quantifier, since the alternative reading, in which the object quantifier takes narrow scope relative to the negation, is a contradiction (to bring out the wide-scope reading of the negation relative to the quantifier, I am replacing the negation+ *many* combination as *few*)

(17)# John could read few books, but the many books that he could read were classics.

In short, inverse scope seems impossible with British English *do* but possible with VP-ellipsis.

2.1.3.A-movements

The possibility of A-movements co-occurring with the British English *do* is mixed. Unaccusatives and subject-to-subject raising constructions can co-occur with British English *do* as well as in the VP-ellipsis construction, but passives cannot co-occur with British English *do*, a contrast with VP-ellipsis.

(18)(Unaccusatives)

a.John might die, and Fred might do___too.

b. John might die, and Fred might ___too.

(19) (Subject-to-Subject Raising)

a. John might seem to enjoy that, and Fred might do____too.

b. John might seem to enjoy that, and Fred might___, too.

(20) (Passive)

a. *John might be visited by Sally, and Fred might be done ___, too.

b. John might be visited by Sally, and Fred might be ___, too.

2.1.4. Ellipsis-Containing Antecedents

Elbourne 2008discusses a case of VP-ellipsis first discussed by Schwarz 2000 and Hardt 1999, in which the antecedent for a deleted VP can involve a verb that is distinct from a verb that is within the deleted VP itself, provided that the corresponding verb in the antecedent has itself been deleted. An example is (21):

(21) When John has to cook he doesn't want to, and when he has to clean, he doesn't ___either.

The point that is of interest here is that (21) can be interpreted along the lines of (22):

(22) When John has to cook, he doesn't want to cook, and when he wants to clean, he doesn't want to clean, either.

In short, the VP *want to cook* can antecede the ellipsis of the VP *want to clean*. This case is extremely interesting in resolving the question of identity in null anaphora. Clearly, identity of lexical or semantic content of the phrase is not necessary, but the question is how to relax the notion of identity to just the right point while preserving the intuition that some notion of identity is necessary. After all, *Although John didn't drink the wine, Bill did* can't mean that Bill ate the steak. Below, I will propose an analysis of this phenomenon within the approach taken here.

Crucially, such ellipsis with non-identical verbs can occur within the British English *do* construction as well:[9]

(23) When John has to cook, he won't want to, and when he has to clean he won't do either.

An intended paraphrase of (23) is (24):

(24) When John has to cook, he won't want to cook, and when he has to clean, he won't want to clean, either.

I will return to the question of how ellipsis-contained antecedents are treated in my analysis below.

The possibility of British English *do*'s containing (under reconstruction) a deleted VP indicates that the construction must contain at the minimum enough structure to house a VP.

2.1.4.Interim Summary and a Possible (But Too Hasty) Generalization

We can display our conclusions in the following table:

(25)Type of Predicate Anaphoric Construction

VP- Ellipsis	British English *Do*	
Wh-Traces	Yes	No
Topicalization Traces	Yes	No
Inverse Scope	Yes	No
Unaccusatives	Yes	Yes
Subject-to-Subject	Yes	Yes
Passives	Yes	No
Ellipsis-Containing Antecedents	Yes	Yes

The rest of this paper is devoted to accounting for the differential behaviors of various types of anaphoric (in the extended use of the term, rather than its more narrow use in GB and minimalism) constructions. However, we can already evaluate and discard one hypothesis, setting aside the case of ellipsis-contained antecedents. We might conclude that all and only A traces are permissible in the British English *do* construction, while VP-ellipsis tolerates both A and A-bar traces. This prediction is immediately falsified by the impossibility of passive interaction with British English *do*, and we will account for this in Section 4.5 when we discuss the crucial nature of Voice in accounting for the British English *do* construction. However, the equation of A-trace status with

[9] Thanks to Paul Elbourne for supplying this judgement.

compatibility with the British English *do* constructions suffers another blow, as can be seen by examining its incompatibility with pseudo-gapping.

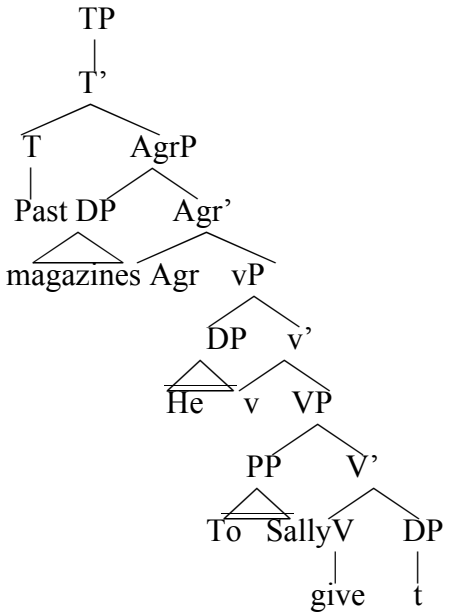
2.1.5 The Incompatibility of Pseudo-Gapping With British English *Do*

Consider the ellipsis in (26), dubbed *pseudo-gapping*:

(26) Although he didn't give books to Sally, he did ___magazines.

The sequence *give t to Sally* has clearly been elided in the main clause of (26). Assuming that only constituents can delete,[10] this indicates that the object must have moved to a position outside of the constituent *give t to Sally*. Following Johnson (2001), let us posit (27) as the structure for the main clause of (26):

(27)



Most researchers who have worked on this construction, myself included, have postulated the movement of an overt constituent, called the *remnant*, to a position outside of the deleted constituent. What is relevant for our purposes is the nature of this movement ,i.e. whether it is an A-movement or an A-bar movement.

Baltin 2003 provides two arguments in support of the A-status of the pseudo-gapping remnant:[11]the fact that the remnant does not license parasitic gaps, and the fact

[10] This assumption is questioned by an anonymous reviewer, who suggests that pseudo-gapping may in fact delete a non-constituent. Aside from the general undesirability of weakening linguistic theory to allow for non-constituent deletion, Baltin 2006 shows that the constituent structures suggested by a constituent deletion analysis of pseudo-gapping are independently needed to account for object binding from a supposedly VP-fronted position into clause-final adverbials. An example is given in (i):

(i) Visit every prisoner$_i$ though I may after his$_i$ lawyer does….

[11] See Gengel 2007 and Takahashi 2003, 2004 for alternative accounts, as well as Aelbrecht 2009. Gengel and Aelbrecht attempt to resurrect the analysis of pseudo-gapping as involving movement to a Focus Projection, a position originally due to Jayaseelan 1999. However, in addition to the two arguments against movement to a

that when multiple remnants are moved outside of the deleted constituent, the first can bind the second, if the second is an anaphor. Parasitic gaps are standardly assumed to be licensed by A-bar moved DPs, rather than A-moved DPs (Engdahl 1983) and binding of anaphors is assumed to be restricted to binders in A-positions (Chomsky 1981). In this vein, pseudo-gapping remnants do not license parasitic gaps, indicating that they do not act as A-bar elements:

(28)*Although John didn't kiss $MARY_i$ without looking at her_i, he did $SALLY_j$ without looking at e_j.

Furthermore, pseudo-gapping remnants can bind anaphors that are second remnants(Baltin 2003, ex. (52)):

(29) Although he wouldn't introduce THOSE PEOPLE to TOM AND SALLY, he would THESE PEOPLE to EACH OTHER.

These considerations lead me to consider the remnant in pseudo-gapping to be in an A-position.

Returning to the British English *do* construction, an anonymous reviewer has noted that pseudo-gapping cannot occur in that construction:

(30)*Although he wouldn't visit MARTHA, he would do ___SALLY.

We can draw two conclusions from this discussion:(i) British English *do* is incompatible with pseudo-gapping; (ii) the movement involved in pseudo-gapping is A-movement, rather than A-bar movement. Therefore, we can again see that the A versus A-bar distinction is orthogonal to a characterization of the class of possible extractions in British English *do*; while it is true that no A-bar extraction has been found which is possible in British English *do*, there are some A-extractions that are possible

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Focus projection that are given here (because they involve movement to an A-position, and Focus is standardly viewed as part of the A-bar system), there are several others that could be given. First, movement to a Focus projection couldn't explain why predicative constituents cannot be pseudo-gapping remnants (as noted in Baltin 2000)

(i)*Although they didn't become angry, they did___sad.

Second, Baltin 2006 argues that the same movement is involved in so-called "Pesetsky's Paradox" cases, as in (ii), in which the object must be able to bind a variable in the temporal, which must itself be outside of the VP (due to the ellipsis in the temporal):

(ii) I visited every $prisoner_i$ after his_i lawyer did___.

Clearly, the object (here *every prisoner*) is not focussed, and if it is the same movement as the one in pseudo-gapping, focus cannot be relevant to that particular movement.

Finally, Johnson 2000, 2001 argues that the movement of the remnant in pseudo-gapping is the same as the movement in Dutch Object-Scrambling, and the scrambled phrase there (which is wider than the class of DPs) is also not focussed.

For this reason, focus seems irrelevant to the movement itself. As for Jayaseelan's observation that the pseudo-gapping is remnant, I would attribute it to the remnant's being the most deeply-embedded constituent after the vP out of which it moved has been deleted. In short, focus in this case would be viewed as being intonationally determined, following Cinque 1993, rather than being determined in a projection that is dedicated to Focus, as in Jayaseelan's work.

(unaccusative and subject-to-subject raising), and some which are not (passive and pseudo-gapping).

2.1.6 Summary and Interim Prognosis

We see that we cannot get a clear answer yet as to whether or not British English *do* shows evidence of internal structure for an unexpressed verbal constituent. It is incompatible with wh-movement, topicalization, whatever process is responsible for inverse quantifier scope (to be discussed in more detail in Section 4), passive, and pseudo-gapping; on the other hand, it is compatible with the unaccusative construction, subject-to-subject raising, and can contain deleted VPs. Can we make sense of this constellation of properties so far?

Our problem can be stated as follows: British English *do* shows some evidence for deletion, but diverges somewhat from VP-ellipsis in ways that have yet to be explained. Our task is to account for its behavior in its totality.

2.1.7.Licensing of the empty position

One of the most salient characteristics of non-pronominal empty categories is the requirement that the position of the empty category be licensed (Lobeck 1995, Rizzi 1990, Merchant 2001, among others). An example of the need for licensing a null context, with respect to VP-ellipsis, can be seen in the following contrast, with (b) being adapted from Bresnan 1976, ex. (28):

(31a). First fire poured out of the building, and then smoke did___.

b.*First fire began pouring out of the building, and then smoke began____.

In (31b), the verb *begin* is analyzed as taking a VP-complement, and, by hypothesis,VP-ellipsis, is licensed by Tense. Zagona 1988 argues that the well-known failure of auxiliary contraction (originally noted by King 1970) to occur before a deletion site is due to an inability of reduced auxiliaries to function as head-governors:

(32) He will visit Fred, and then I will___.

(33) *He'll visit Fred, and then I'll___.

Pseudo-gapping, unlike VP-ellipsis, cannot occur after an infinitive:

(34) Although he wants me to visit Fred, I don't want to____(ie., visit Fred).

(35)* Although I won't visit Sally, I do want to ____Martha.

Finally, VP-ellipsis cannot occur in gerunds:

(36)*Bill's having eaten didn't surprise me as much as Fred's having____ .(i.e. eaten)

Interestingly enough, according to my consultants,[12] British English *do* is out in the same contexts as VP-ellipsis.

(37)*He'll visit Sally, and I'll do too. (reduced auxiliaries)

(38)*John's visiting Sally wouldn't surprise me, but Bill's doing__ certainly would.(gerunds).

Finally, British English *do* cannot occur in infinitives, a trait that it shares with pseudo-gapping:

[12] Thanks to David Adger and Paul Elbourne for supplying these judgements.

(39)*Although Bill wants me to talk to Sally, I don't want to do___.[13]

3. Theoretical Implications Of British English *Do*'s Characteristics and a Proposal

If we agree that A-movement is derived by movement (admittedly by no means a sure thing- see, for example, Bresnan 2002 and Pollard & Sag 1994, among others), we cannot say unequivocally that British English *do* lacks internal structure; the subject must have originated in a lower position, in the case of subject-to- subject raising and unaccusatives- specifically, within the deleted VP. Furthermore, the phenomenon of ellipsis-containing antecedents requires an account within anybody's view of anaphora. However, if one then assumes internal structure for the null site within this construction, one must then explain the impossibility of A-bar bound traces, pseudo-gapping traces, and inverse scope in this construction.

I will now propose an account of ellipsis which will reconcile the different degrees of porousness of different ellipsis constructions.

3.1. Background Assumptions

3.1.1. Phases

Phases are bits of clause structure which are units of syntactic processing, in that they provide boundaries within which to state end-points of derivations in a bottom-up approach to syntax; in a sense, they are akin to cyclic nodes, assuming a cyclic principle. One argument for this approach, made by Chomsky 2000, comes from consideration of the ungrammaticality of (40) (Chomsky 2000, ex. (12)(a)):

(40) *There is likely [a proof to be discovered]

If one assumes that syntactic operations start with (or perhaps entirely consist of, contrary to what this paper is arguing) the operation Merge, which merges two elements together, either primitive lexical items or already constructed elements, and these lexical items include the expletive *there*, one might ask what the problem is with (40). After all, one could internally Merge (i.e. raise) the underlying object of *discover*, *a proof*, in [Spec, *to*], and later externally Merge the expletive in the matrix [Spec, TP]. Chomsky accounts for the ban on this option by an economy condition that prefers Merge to move, or perhaps External Merge to Internal Merge. However, Chomsky then asks why this preference of Merge to Move doesn't always ban movement when an expletive is present in the initial set of lexical items that is drawn from the lexicon, as in (41) (Chomsky 2000, ex. (16a)):

(41) It's fun [PRO to [t go to the beach]]

Chomsky's proposal to deal with this seeming paradox is to restrict the set of competitors for the economy conditions by considering only the lexical items that are relevant for construction of the processing unit that is being built (in this case, the

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[13] It should be noted that Aelbrecht, on p. 215, reports judgements, in her discussion of (91), that suggest that *do* is the licensor of the ellipsis, rather than a higher head. However, I have checked with five native speakers of the relevant dialect, and they all judge sentences of the form in (34) to be unacceptable. She does not discuss the inability of reduced auxiliaries to license British English *do*. I have no account of the discrepancy.

embedded CP, α). Because the expletive, *it* in (41), is outside of this CP, it is ignored, and movement of PRO to [Spec, *to*] is permitted.

In short, syntactic processing is restricted to phases. Chomsky takes the clausal phases to be CP and vP. The need for two clausal phases is thus established. However, I will propose,following Collins 2005, to generate VoiceP above vP,[14] and to take VoiceP, rather than vP, to be the clause-internal phase.

The division of clausal structures into phases brings with it a natural characterization of islands, given that phases are taken to be complete units of grammatical processing. Once a phase has been completed, it becomes frozen with respect to further grammatical operations. Chomsky 2000 formulates a constraint called the Phase-Impenetrability Condition, formulated as in (42) (Chomsky 2000, (21)):[15]

(42) Phase-Impenetrability Condition

In phase α with head H, the domain of H is not accessible to operations outside α, only H and its edge are accessible to such operations.

The edge is considered to be the specifier and material adjoined to H's immediate projection.

The Phase-Impenetrability Condition (henceforth PIC) entails that, if the phases are vP and CP, wh-movement that originates within vP can only move out of vP through the Spec of vP.There are at least two ways that this can occur: (i) the wh-phrase totally occupies [Spec, vP]; (ii) the wh-phrase can occur within a larger phrase that is within [Spec, vP]. Because I will argue ultimately that a constituent larger than vP, rather than vP itself, is the clause-initial phase, I will defer discussion of this issue.

The PIC will, however, play a crucial role in my analysis.

3.1.2. Middle Field" Structure

I will assume the following structure for the clausal portion that follows Tense (setting aside irrelevant projections such as Cinque's 1999 adverbial projections and mood and

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[14] Kratzer 1996 essentially takes Voice to be synonymous with v. However, Collins 2005 argues that both are necessary. The matter is discussed in more detail in Section II.A.3 of the present paper.

[15] The PIC may actually be too strong. Idan Landau (personal communication) has pointed out to me that variable binding by quantifiers may in fact counter-exemplify this. For example, the binder for the pronoun in (i), construed as a variable bound by the co-indexed quantifier, is several clauses up from the pronoun; locality is clearly irrelevant here:

(i) Every man$_i$ thinks that Sally believes that it is obvious that he$_i$ will win.

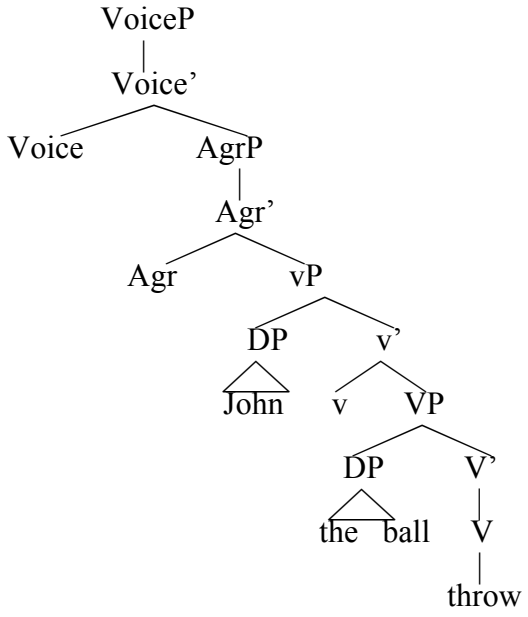
Interestingly enough, Barker and Jacobson 2007 note that Montague has an analysis of such cases that would preserve locality. However, the same problem arises with respect to wh-in-situ, which has been heavily argued not to involve LF-movement (Li 1992, Cole and Hermon 1994, and Reinhart 1998):

(i) Who thinks that John is certain that Mary will buy what?

Perhaps the notion of phases as being unanalyzable upon completion can be relaxed along the lines of Grohmann 2003. I leave this matter here, since even Grohmann's formulation would not affect the conclusions in the text.

aspectual projections):

(43)



3.1.2.1. VoiceP As Distinct From vP

A word about the category Voice is in order, because it may be most familiar to readers in the sense of Kratzer 1996, who introduced it. However, there are significant differences between Kratzer's use of this term and that of, e.g., Collins 2005; Kratzer essentially used the term as a synonym for what is now termed as v (i.e. as the node whose Specifier was the agent). In Collins' analysis, the two projections Voice and v are kept distinct, and both projections play a crucial role in his analysis of the passive construction. I am following Collins' analysis, in its essentials, and will return to the incompatibility of the passive construction with the British English *do* construction in the next section.

3.1.2.2.. The Category AgrP

The term AgrP is actually a cover term for whatever internal arguments land outside the vP; it can't literally be Agr, since more constituents than participate in overt agreement, such as PPs and CPs, end up in its specifier position. I follow Johnson 2001 in identifying remnant movement in pseudo-gapping with Dutch object scrambling (see Johnson 2001 for many parallels and Baltin 2003 for some additional ones.) An example of scrambling is given in (55) (Johnson 2000, (80)):

(44) ….dat Jan Marie heft geprobeerd [t te kussen].
….that Jan Mary has tried to kiss.

Parallel to scrambling out of an infinitival complement is, as pointed out by Baltin (2002), pseudo-gapping out of an infinitival complement:

(45) Although he hasn't tried to kiss Sally, he has_____Mary.

It is clear that the scrambled object in Dutch must be outside of the vP. As

pointed out by Zwart 1997, adverbs of all types can intervene between the scrambled object and the vP, as well as sentential negation (Marcel den Dikken personal communication). Examples are given below:[16]

(46)
(a) dat Jan Marie hartstochtelijk gekust heeft
that Jan Marie passionately kissed has
(b) dat Jan Marie nog nooit gekust heeft
that Jan Marie yet never kissed has
(c) dat Jan Marie niet gekust heeft
that Jan Marie not kissed has
(d) dat Jan dat onderwerp wijselijk met rust heeft gelaten
that Jan that subject wisely in peace has left
('that Jan wisely left that topic aside'; speaker-oriented adverb)

While the status of VP-adverbs as occurring in projections that are distinct from the VP is controversial (e.g., Bobaljik 2002), the higher-adverbs and negation seem to be less so. Furthermore, as in English, the latter type of element does not prepose in VP-fronting, as pointed out by den Dikken. Therefore, the placement of the scrambled object in a projection superior to the vP seems empirically supported, as is, by inference, the remnant in English pseudo-gapping.

3.1.2.3. Spec, VoiceP as the landing site for vP

Baltin 2002 argues, on the basis of sentences such as (56), that movement of a verbal projection, and not just the verb itself, must occur normally. The argument there assumed that pseudo-gapping was just deletion of a verbal projection, and movement of the verbal projection would occur if deletion of it did not occur.

However, a logical possibility was not eliminated in that paper: the possibility that movement of the verbal complement triggered subsequent deletion of the verbal projection. In that case, the verbal complement would not move unless the verbal projection deleted; if the verbal projection did not delete, the verbal complement would remain in situ in the syntax.[17]

To eliminate this latter possibility, Baltin 2007 demonstrates that movement of a verbal projection can be shown, as in (47):

(47) John visited every prisoner$_i$ after his$_i$ lawyer did_____.

The structure for this sentence must (a) allow the object to c-command into the temporal, so as to allow the quantified object to bind a variable into the temporal; and (b) place the temporal outside of the VP, so as to avoid the infinite regress problem that would result from placing it inside of the VP. In other words, placing the temporal inside the VP would make the ellipsis here a case of Antecedent-Contained Deletion (ACD), but without any of the licensing factors for ACD that would allow the deleted phrase to escape its antecedent. Both requirements are met by a derivation of (47) in which the object has moved out of the VP, and the verbal projection has moved still higher (for details, see Baltin 2007).

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[16] I am indebted to Marcel den Dikken for these examples.
[17] This approach is taken by Takahashi 2004.

However, Baltin left open the question of exactly where the verbal projection was moving to. Given that a phrasal projection was moving, the most natural position for the verbal projection's landing site was a Spec position, but the Spec of what? Because it must occur after Tense, the verbal projection could not be in [Spec, TP], even if one allowed for multiple Specs. For convenience, the projection was labelled ZP, so that vP was located in [Spec, ZP], but this was clearly not an answer.

On the other hand, if we are positing a VoiceP for independent reasons, it would be natural to identify Z with Voice, so that the vP is located in [Spec, VoiceP]. Hence, we have a motivation for VoiceP as separate from vP.

3.1.3 The Theory of Deletion

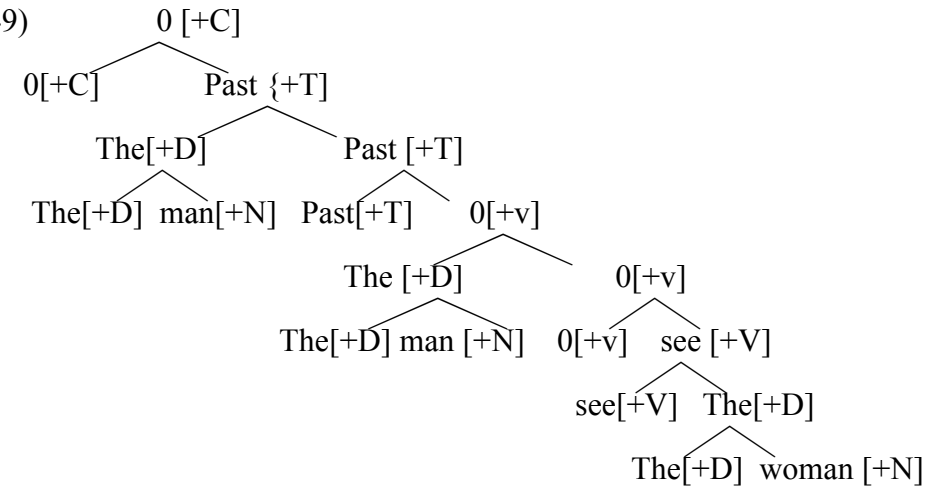
3.1.3.1. Where Does Deletion Apply?

The notion of deletion that I will employ is actually quite simple, if a bit unconventional: deletion applies in the syntax, deleting the formal features of a node when the node merges with another node. However, recognition of the simplicity requires spelling out some crucial assumptions of the theory in which it is embedded.

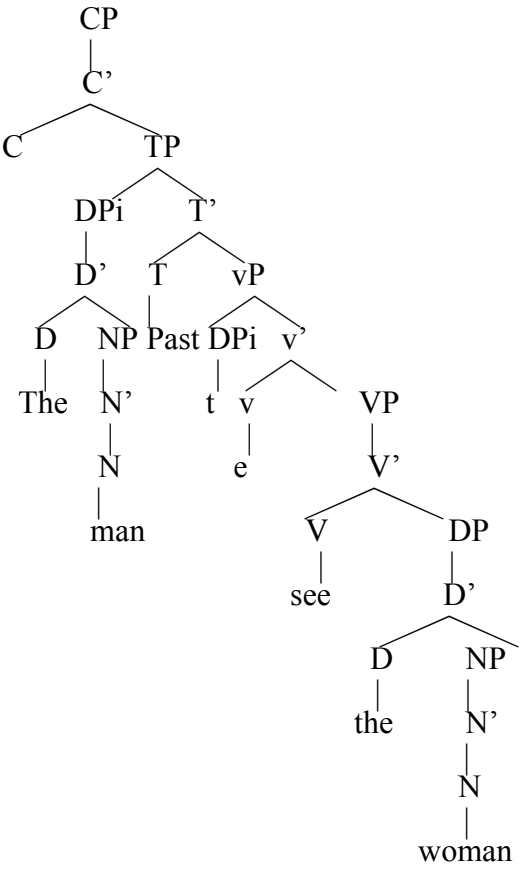
Bare Phrase Structure (Chomsky1995b) builds phrase-markers (now called "syntactic objects") in a bottom-up fashion that eschews many of the familiar notions that are a staple of phrase-structure rules, such as bar levels and pre-terminal nodes (also, non-terminal nodes that specifically mention phrasal category labels). Hence,the Bare Phrase-Structure representation of (48) would be (49), as a first approximation, rather than the more familiar (50):

(48) The man saw the woman.

(49)



(50)



Representations such as (49) try to make explicit the notion that phrase-markers are intended to be projections of the lexicon. Therefore, we really have *theP* instead of *DP*, and so on.

We must therefore take seriously what a lexical item is. Traditionally, as in Chomsky1965, a lexical item is in reality a bundle of three types of features: formal features, semantic features, and phonological features. Putting aside semantic features for the moment, Halle & Marantz 1993 have argued for "late insertion" of vocabulary items, at PF. Let us assume that vocabulary insertion depends on formal features. If formal features have already deleted, vocabulary insertion will automatically be bled. Deletion of formal features in the syntax will therefore derive the fact of non-pronounciation of an elided phrase.

By contrast, the traditional view of deletion as occurring at PF must stipulate a conjunction of two types of features that delete-formal as well as phonological. Deletion of formal features will also account for Merchant's 2001 conception of "PF Islands", which accounts for overt movement being banned but not covert movement.

Syntactic deletion of formal features, together with Bare Phrase Structure, also automatically derives the fact, noted by Johnson 2004, that only maximal projections delete, and that heads do not delete, as shown by this adaptation of Johnson's (4)(b):

(51) *He turned these lights on after he did those lights off.

Bare Phrase Structure takes projections to just be the same type of elements as their

heads. Therefore, a projection could not exist without its head, and it would be impossible to delete the formal features of one without deleting the formal features of the other.

The deletion that is being proposed here occurs much earlier than PF, occurring in the narrow syntax. As such, the deletion will have semantic effects, a consequence that will be put to good use in the next section, when my account of ellipsis-containing antecedents is presented.

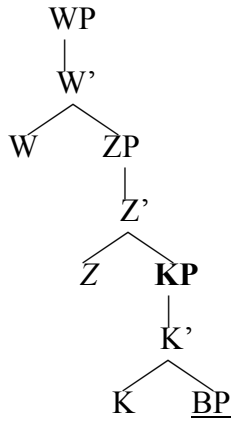
I have proposed to delete formal features in the syntax, deferring for the moment my discussion of what is meant by "semantic" features, and bleeding insertion of phonological features; more specifically, I assume that deletion operates in the following fashion:

(52) Deletion occurs when the phrase merges.

There are two types of merge, and deletion is timed to occur with either type. The two types are external merge, the first time an element is merged, and internal merge, essentially movement taken to be copying plus deletion of the original. Allowing deletion to take place at the time of either type of merge will allow a phrase to delete when it internally merges in a position, e.g. vP merging in [Spec,VoiceP].

To see how this works, consider (6), an abstract schematization of how the system works, repeated here:

(6)



The KP will delete when it merges with Z,rendering itself and everything within it frozen for formal operations, *once ZP is encountered*; because Z is the head that is accessed when deletion occurs, any formal operation that Z activates can occur at the same time as deletion of KP. It is as though this stage of derivations is a window into operations that involve formal features within KP, a window which closes as soon as Z is bypassed as the merging head.

3.1.3.2. Licensing

Any theory of deletion must account for the fact that deletion does not occur freely, as we have seen in Section 2.1.7. As mentioned previously, a variety of proposals have been made as to how to capture the fact that deletion must be licensed by a particular head. Rizzi 1990 and Lobeck 1995 simply stipulate a constraint that non-pronominal empty categories be head-governed, and Merchant 2001 proposes a feature E (for elide) on the

licensing head, which is taken as a requirement not to pronounce its complement, and which gives the complement a certain semantics(this last aspect of the E feature is intended to capture the identity requirement on elided phrases). Aelbrecht 2009 revises Merchant's mechanism by taking the E feature on the licensing head to trigger an operation of Agree, which requires that the E feature on the c-commanding head (the probe) agree with an E feature on some c-commanded maximal projection; Aelbrecht's mechanism has the advantage that it doesn't restrict the elided phrase to complement position of the licensing head.

While these proposals are good and necessary first steps, I don't see them as being ultimate explanations. The head-government mechanisms of Rizzi & Lobeck, while legitimate in the Government-Binding theory of Chomsky 1981, rely on the theoretically non-primitive notion of government. The E-feature of Merchant (2001) does not account for the fact that traces must be licensed in the same way as elided categories. Trace-licensing is not plausibly located with an E-feature on the licensing head. The deletion is triggered by the movement,viewed as copying plus deletion of the original.

I would propose an alternative, within the view of deletion proposed here. Since deletion eliminates formal features, leaving only semantic features, let us hypothesize that an object without formal features is not a legitimate object within phrase-markers; one way to eliminate such objects is by incorporation, which incorporates them onto higher heads.

In short, in this view, licensing heads are simply the hosts for incorporation. I would emphasize that this view, if correct, goes a certain distance, possibly the entire distance, toward providing a minimalist answer to the question of why licensing exists. In my view, it is less stipulative than an E-feature, and is certainly less so than a head-government requirement, in that it can account for why traces are subject to a licensing requirement.

However, adoption of this view dissociates licensing from being a necessary condition of movement itself. Rather, it is the only remedy for a condition that must be resolved. As such, it is consistent with the timing of deletion advocated here, i.e. when the phrase merges.

One consequence of this view of licensing must be mentioned, in that it shows a real conceptual difference from Merchant's view. The E-feature on the licensing head implies that ellipsis, in this conception, is triggered, and is not truly optional; it must apply if the E-feature is present. In contrast, the present view of licensing lays the responsibility on an optional grid in the licensing head's lexical entry that houses the complement. Ellipsis, under this conception, is not triggered, but rather is only available if a c-commanding head that can host the elided constituent's features is present.

We are now in a position to evaluate this system with respect to the operations involving KP that have been discussed here.

4. Application of the Theory

Of the three ellipsis constructions that I have discussed, VP-Ellipsis, Pseudo-Gapping, and British English *Do*, there is some evidence that they delete phrases of various sizes. For one thing, Merchant 2007 has shown that VP-ellipsis tolerates active-passive

mismatches between the antecedent and the elided phrase, while pseudo-gapping does not:

(53) John visited Sally, but Susan was not_____.

(54) *Although John gave Susan a book, Sally wasn't_____a magazine.

Let us start with VP-ellipsis. Merchant 2007 proposes an interesting argument that, in a framework that includes both VoiceP and vP projections (as well as a VP projection), that VP-ellipsis is in reality vP-ellipsis. His argument is based on the claim that the traditional VP-ellipsis allows voice mismatches, while pseudo-gapping does not (the contrast is Merchant 2007, (19a) vs. (27a)):

(55) This problem was to have been looked into, but obviously nobody did <look into this problem>.

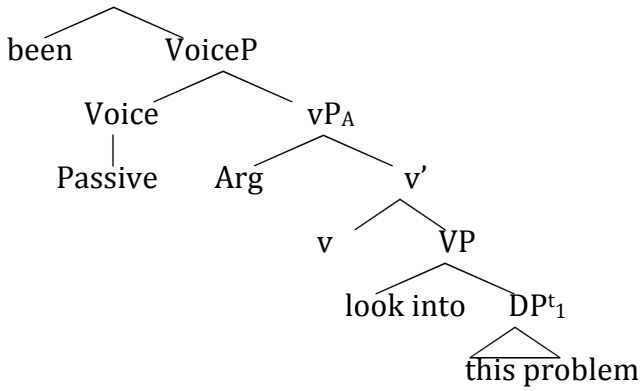
Vs. (56): *Roses were brought by some, and others did ____lilies . <bring>.

Merchant's analysis accounts for the difference between pseudo-gapping and VP-ellipsis by assuming that deletion requires structural identity between the antecedent and ellipsis sites, as argued by Chung 2005, and taking VP-ellipsis to delete a smaller constituent than that needed by passive (which is taken to crucially involve a v that is specified for Voice), and pseudo-gapping to delete a larger constituent than the constituent that is needed for passive.

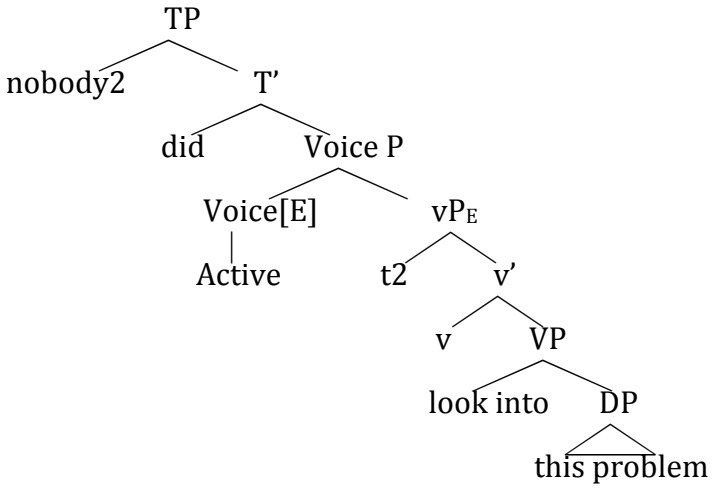
To illustrate, Merchant's structures are as follows. First, (55) has the following structures for the antecedent and elided VPs (Merchant 2007, (27b) and (27c)):

(57)

a. [$_{DP}$ This problem]$_1$ was to have vP



b.

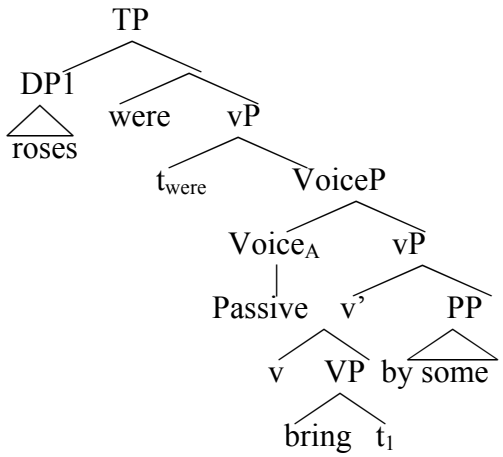


The constituent that is elided, labelled as VP_E (for elided), is identical to its antecedent VP_A. The mismatch is on the Voice head, which is external to both the antecedent and the elided VP.

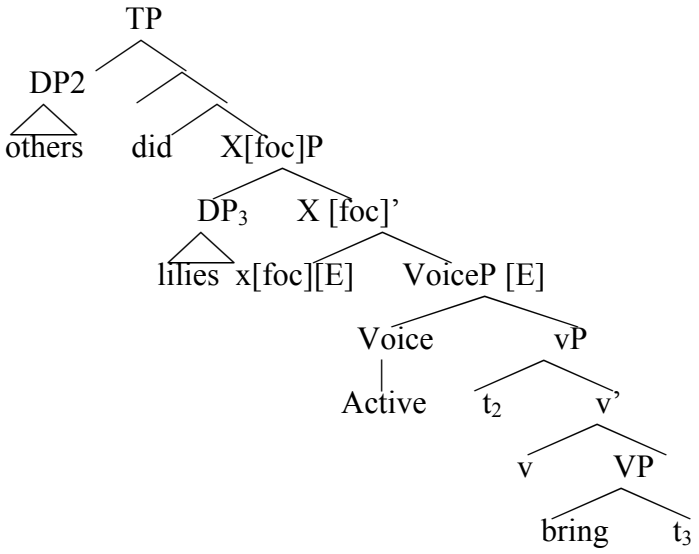
On the other hand, pseudo-gapping is taken by Merchant to elide a larger constituent, vP, which contains the mismatching voice features on the v heads. (58) is Merchant's rendition of the situation (Merchant 2007, (9b) and (9c)):

(58)

(a)



b.



Because pseudo-gapping deletes VoiceP, rather than vP, the deletion site includes the Voice head, and this mismatch between the deletion site and the antecedent causes non-identity between antecedent and ellipsis site, blocking the ellipsis of VoiceP.

Merchant's account of the possibility of voice mismatches relies on a view of VP-deletion as deletion of a category that is smaller than Voice; this raises the possibility of a smaller constituent than VoiceP, such as vP, as hosting an intermediate wh-trace, and is thus incompatible with my account of the extraction possibilities for the British English *do* construction.

There is an alternative explanation for the voice mismatches, however. A salient difference between English and Dutch is that the latter has impersonal passives while the former does not. Specifically, as Perlmutter 1978 has shown, Dutch unergatives have passive variants, while English unergatives do not (Perlmutter 1978, (32)):

(59) Er wordt hier door de jonge lui veel gedanst .
'It is danced here a lot by the young people.'

English passives must take a Case-bearing object. I will discuss this property more fully in Section 4.5,[18] but at this point it is relevant to note that pseudo-gapping would remove the object, depriving the vP of the Case-marked object that is necessary for the passive construction. Therefore, the incompatibility of passive with pseudo-gapping would have nothing to do with a feature mismatch on the v head. We do not need to appeal to a larger constituent deleting in pseudo-gapping than in VP-ellipsis to explain the apparent incompatibility between passives and pseudo-gapping.

The difference between this account of voice mismatch possibilities and Merchant's highlights, in my view, a slight but crucial difference between us in the identity requirement for ellipsis. Like Merchant, I assume that identity of syntactic form is crucial, but Merchant seems to assume that all syntactic form is relevant for the notion

[18] This difference between English and Dutch is not treated by Collins 2005, whose analysis would essentially predict that English would be identical to Dutch in this regard.

of identity, whereas I assume that only semantically relevant syntactic form is necessary.

To see the difference between the strict (all) and loose (only semantically relevant) requirements for identity, consider (60):

(60) Speaker A: Will John finish his homework?
Speaker B: He already has__.

Clearly, the elided VP contains a past participle, while the antecedent does not. Is there a syntactic reflex to this distinction? Collins 2005, which Merchant assumes in his analysis of the passive, seems to think so; he posits a PartP, which is headed by the perfect participle, an uninterpretable element in Collins' view. Indeed, in theories in which inflectional morphology is done in the syntax, this view is virtually forced upon us. If so, the PartP must be ignored for the purposes of calculating the identity needed for a permissible ellipsis.

This means that something less than full syntactic identity is needed in calculating the identity requirements for ellipsis. It seems that all and only interpretable elements are inspected for this purpose.

With this in mind, we might ask whether Voice is an interpretable or an uninterpretable feature. Kratzer 1996 takes Voice to be interpretable, essentially taking it to be synonymous with v, whose Spec traditionally houses an Agent. This clearly has nothing to do with what most people (including me and, I suspect, Merchant) take to mean by Voice, which is a grammatical configuration with a specified array of arguments. The operative term in the last sentence is the term *grammatical*; passive voice operates on a variety of thematic configurations, as in the following, none of which take agents as the logical subjects:

(61)
(a) Fred was bitten by the lovebug.
(b) Obama is loved by all.
(c) Fred was recognized by many people.

In all of these sentences, the thematic roles of the arguments are borne by different arguments than in the corresponding actives, and yet we cannot find a common semantic thread to their occurrence in the passive voice that distinguishes this voice from the active voice.

Which is not to say that there are not systematic differences between actives and passives semantically. Chomsky 1975 points to the following contrast between (62)(a) and (b):

(62)
(a) Beavers build dams.
(b) Dams are built by beavers.

The subject of the sentence is taken to be the subject of a semantic predication, and this causes a difference in active and passive sentences, so that (62a) is taken to be a generic statement about beavers, while (62b) is taken to be a statement about dams.

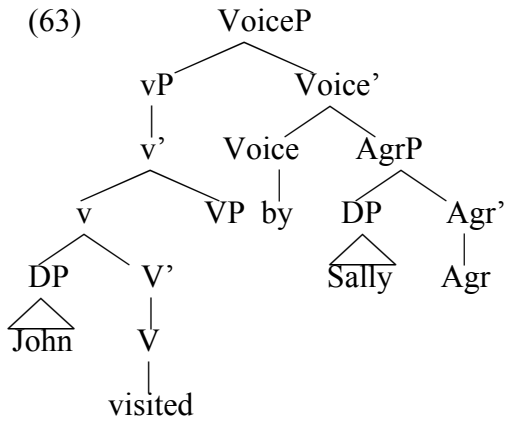
However, this difference is not tied to the voice per se. Rather, there is considered to be a surface interpretation for predication, and the re-arrangement of arguments that accompanies one element in Voice over another will affect the input to predication.

In short, syntactic differences that play a role in interpretation will be calculated for identity, while syntactic differences that do not play a role will not be. Passive will cause a different array of argument realization, and this different array will cause the antecedent

and the elided vPs to differ in relevant respects. The passive vP will lack an external argument, while the active vP will contain one.

We must now consider why active and passive mismatches are possible if VoiceP deletes. Consider the structure of a passive VoiceP, prior to ellipsis:

(63)



The element after ***by***, in this case *Sally*, will be interpreted with whatever thematic role it had when it was first introduced into the structure, so that,e.g. an agent is identified as such by being externally merged with a v'. However, let us consider one of the voice-mismatches, such as (64):

(64) John was visited by Sally, and Fred did____,too.

The antecedent VoiceP and elided VoiceP are identical predications at the point at which the VoicePs of both clauses are compared for ellipsis. Recall that the object DP moves into [Spec, TP] only after the passive VoiceP has been completed. Once the object DP has moved to this position, a new predication has been created, and this is why sluicing, which is actually TP-deletion, requires matching for Voice; Voice mismatches will cause a failure of syntactic parallelism between ellipsis and antecedent once the TPs have been constructed. Because Voice is a projection inferior to T, movement to [Spec, TP] has not yet occurred, and the predications are identical.

In short, I agree with Merchant that pseudo-gapping and (what has been called) VP-ellipsis different size projections, but I would disagree as to what those projections are. In my analysis, pseudo-gapping deletes vP, but what has been called VP-ellipsis really deletes VoiceP.

The proposal, in a nutshell, then, is the following: (i) The structure of the portion of the clause after Tense, is Voice< (Agr)<v<V; (ii) Voice is the clause-internal phase head; (iii) deletion applies when the candidate for deletion is merged, and is deletion of formal features only; (iii) British English *do* is deletion of VP;(iii) pseudo-gapping is deletion of vP; (iv) VP-ellipsis is deletion of VoiceP.

I will now show the proposal's consequences for the demonstration of internal structure for the ellipsis site.

4.1. A-movement to [Spec, vP]

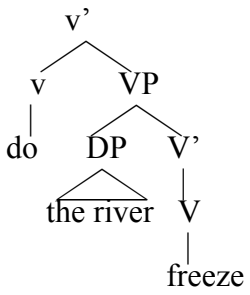
There are three ellipses to consider, in this system:(i) deletion of VP (the case for the British English *do* construction; (ii) deletion of vP (the case for pseudo-gapping); and (iii) deletion of VoiceP . Let us consider all of these options.

1. Consider an unaccusative such as (65), with the British English *do* construction:

(65) The lake might freeze, and the river might do____as well.

The structure of the clause-internal phase in the second conjunct is (66), after *do*, an instance of v, has merged with VP:

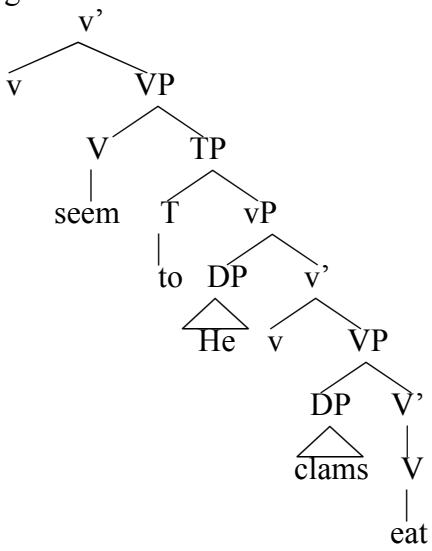
66)



do, the relevant head, can trigger two operations: (i) internally merge (i.e. raise) a DP to its specifier position; (ii) delete the VP. These two operations are inherently unordered, and so we are free to perform internal merge before deletion.

2. Because pseudo-gapping involves movement of an internal argument to [Spec, AgrP], rather than [Spec, vP], illustration of movement to [Spec, vP] in the pseudo-gapping construction requires a more complex structure, as in the structure for the clause-internal phase in the main clause in (67):

(67) Although he doesn't seem to eat mussels, he does_____clams.



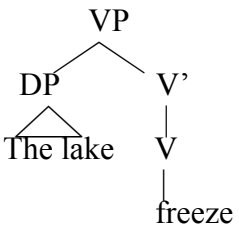
After *he* raises to [Spec, vP], the vP will then move to [Spec, VoiceP], at which point it will delete simultaneously with movement of [Spec, vP] to the matrix [Spec,TP].

Because Voice includes v, deletion of VoiceP will necessarily take place after the entire vP has been built; therefore, movement to [Spec, vP] will necessarily take place before the VoiceP has been deleted. I will illustrate with deletion of an unaccusative:

(68) Although the river didn't freeze, the lake did.

The first stage will involve building the unaccusative in the ellipsis site:

(69)



I am assuming, along with Legate 2003 and others, that all verbs are complements of a higher v.[19] The derivation proceeds therefore as follows:

(70)(a) Merge VP with v.

(b) Internally merge object to [Spec,vP].

(c) Merge vP with Voice.

(d) Internally merge vP to [Spec, VoiceP].

When the result of (80) merges with T, it can delete,after the unaccusative subject *the lake* moves to [Spec, TP].

In sum, A-movement to [Spec, vP] is predicted to be possible in the British English *do* construction, which deletes VP; pseudo-gapping, which deletes vP; and VP-ellipsis, which actually deletes VoiceP.

We now turn to the other case of A-movement, the movement to [Spec, AgrP] which is the signature of the pseudo-gapping construction.

4.2. A-Movement to [Spec, AgrP]

4.2.1. British English *do*

As we have seen, British English *do* is incompatible with pseudo-gapping. For example, (30), repeated here, is ungrammatical:

(30)*Although he wouldn't visit MARTHA, he would do ___SALLY

As usual, we will focus on the clause–internal phase in the ellipsis clause. The derivation is given in (71):

(71)

(a). Merge V' and DP

(b) Merge *do* with the VP result of (84)(a).

At the point at which *do* is the relevant head, two operations are possible: (i) merge the agent in [Spec, *do*]; (ii) delete VP. Let us apply the operations in this order, although either order is possible.

Because VP has deleted, its formal features have deleted, rendering everything that it contains inaccessible to further formal operations. Therefore, the movement of *Sally* to [Spec, AgrP] is impossible. Agr merges with (87) at the next stage, but the DP *Sally* is frozen, because its formal features have deleted.

Because pseudo-gapping deletes vP in [Spec, VoiceP], however, A-movement to [Spec, AgrP] will be possible. Let us next turn to this possibility.

4.2.2.Pseudo-gapping

Recall that we are taking pseudo-gapping to involve prior movement of the pseudo-gapping remnant, originating in VP, to [Spec, AgrP], followed by deletion of vP in [Spec, VoiceP]. An example sentence would be (26), repeated here:

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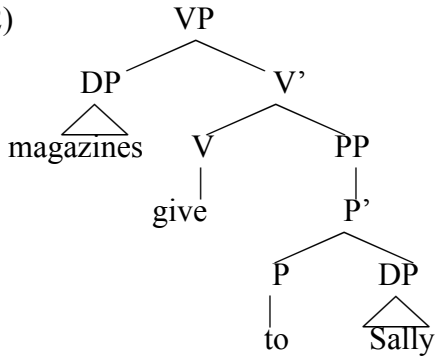
[19] This assumption is required if one assumes, with Marantz 1997, that lexical items are inherently a-categorial, and that v is really the category label for the lexical item.

(26) Although he didn't give books to Sally, he did ___magazines.
The relevant VP would be (72):

(72)



The derivation is (73):
(73)
(a) Merge (88) with v.
(b) Merge the agent with (89a).
(c) Merge Agr with (89b).
(d) Internally merge the object, *magazines*, to [Spec, Agr].
(e) Merge (89d) with Voice.
. (f) Internally merge vP to [Spec, VoiceP]
The vP can optionally delete in [Spec, VoiceP]. [20]
Recall that what has been called VP-ellipsis is, in this system, actually VoiceP-ellipsis.

4.3. Inverse Scope

A number of theories of inverse scope rely on movement, either covert (May 1985) or overt (Kayne1998; Johnson 2000; Hornstein 1995), and it is both beyond the scope of this paper and unnecessary to choose among them to account for the facts as related to the various ellipses here. For concreteness, let us choose Hornstein's account, which ties quantifier scope to overt movement, including A-movement. Taking traces to be copies, each A-movement will leave a copy, and there will be a choice as to which copy is interpreted for scope. Inverse scope will result when an originally embedded quantified nominal will move to a position in which it c-commands a formerly more prominent quantified nominal, and the copy created by movement is interpreted in the c-commanding position. To illustrate, consider (74), on the reading in which the object takes wide scope:

(74) Some man read every book.

We have seen that the object moves to [Spec, AgrP], c-commanding the subject, which is generated in [Spec, vP]. Accepting Hornstein's analysis, (74) would have the

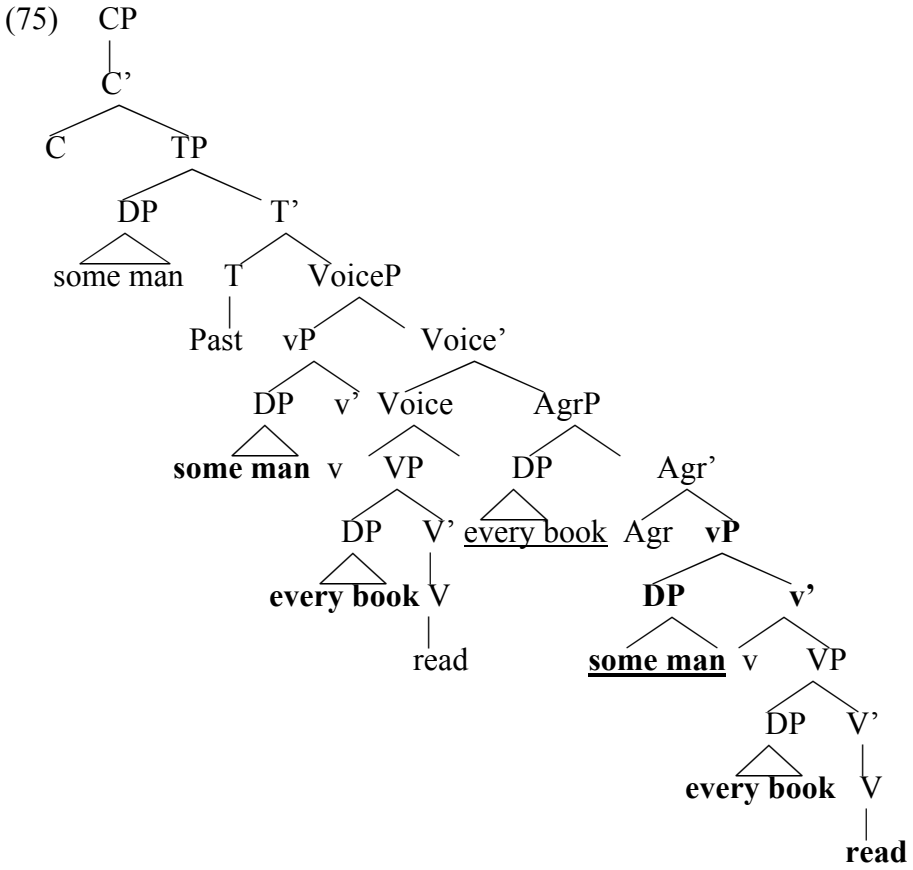
[20] A natural question to ask, at this point, is how to account for the word order if vP doesn't delete. Baltin 2003 shows that multiple arguments can move to multiple specifiers of Agr, as in (i):

(i)Although he wouldn't give books to Sally, he would ___magazines to Susan.

I have nothing to add to this question, which has been tackled by others in the literature (see Collins & Thrainsson1996, Williams 2002, among others).

structure in (75), in our framework:

(75)



Recall that deletion is indicated by bolding, and the underlined DPs are the chain links that are interpreted for scope.[21] In this case, the first movement of the object to [Spec, AgrP] will cause the object to c-command, in this new position, the original position of the subject, allowing inverse scope.

We can see, then, that A-movement to [Spec, AgrO] will allow inverse scope, and we have already seen that this movement is permitted when either vP or VoiceP deletes, but not when VP (the case of the British English *do* construction) deletes. Therefore, VP-deletion will bleed any movement that will allow inverse scope. We have thus accounted for the scope possibilities if we assume overt movement to determine scope possibilities and the theory of deletion that is assumed here.

4.4 Wh-movement

[21] I am using Hornstein's interpretation of chain links for expository convenience, but I am aware of the difficulties in assuming a literal interpretation of assuming that the copies of A-chain links remain and are interpreted, especially given the binding-theoretic status of such links. My own preference, following Lasnik1999, would be to literally delete A-chain links; in this case, one might interpret Hornstein's mechanism derivationally, interspersing scope interpretation directly with A-movement. This is not the place to develop this alternative, however.

Wh-movement, by the PIC, will only be able to escape VoiceP from the edge of VoiceP. Typically, an object within vP will be able to reach the edge if vP has moved to VoiceP's Spec. An object will, however, be trapped within VP, under our assumptions, if this VP deletes when it merges with v. If deletion does not occur until vP or VoiceP is created, the wh-phrase will be able to first escape to [Spec,VoiceP], and wh-extraction to the wh-phrase's surface resting place, in [Spec, CP], will be possible. To illustrate, consider (9), repeated here, with the derivation in (76):

(9)*Although we don't know what John might read, we do know what Fred might do___.

(76) (a)Merge V, *read*, and the wh-object:
(b) Merge the VP with *do*
(c) Delete the VP.

At this point, the wh-phrase, as part of the deleted VP, itself deletes, and since the wh-phrase can only move to the phase edge, [Spec, VoiceP], it is no longer eligible for this movement.

We can contrast the unavailability of wh-extraction in the British English *do* construction with its availability in pseudogapping and VP-ellipsis. Recall that pseudo-gapping is analyzed as vP-ellipsis in [Spec, VoiceP], with prior movement of one internal argument (the remnant) to [Spec, AgrP]. An example of pseudogapping with wh-extraction is (77):

(77) Although I don't know which books you gave Sally, I do know which ones you did____Fred.

In this case, pseudo-gapping of a double object construction, the indirect object has moved to [Spec, AgrP], and the direct object has wh-moved. The derivation of the embedded clause in which these three operations (movement to [Spec, AgrP], vP-ellipsis, and wh-extraction to [Spec, CP]) is given as follows.

(78)(a) Create the embedded VP:
(b) Merge this VP with v
(c) Merge the result with the subject *you*, closing off vP
(d) Merge vP with Agr:
(e) Internally merge the object, *Fred*, to [Spec, AgrP], closing off AgrP:
(f) Merge the result with Voice
(g) Internally merge the vP to [Spec, VoiceP], closing off VoiceP.

At this point, the second object, *wh-ones*, can move to [Spec, CP], the subject, *you*, can move to [Spec, TP], and the vP can delete. The vP is at a phase edge, [Spec, VoiceP], and nothing prohibits extraction from within the vP to positions within the higher phase.[22] Hence, pseudo-gapping (i.e. vP-ellipsis in [Spec, VoiceP], and VP-ellipsis (i.e.VoiceP-ellipsis) will both permit wh-extractions.

4.5. Passive

A signature characteristic of the British English *Do* construction is its inability to occur in the passive, as evidenced by the ungrammaticality of (20a), repeated here:

(20a).*John might be visited by Sally, and Fred might be done ___, too.

The account of this incompatibility of British English *Do* and passives will be shown to be a straightforward consequence of our theory of deletion, in which British

[22] Notice that this account is incompatible, as far as I can see, with Legate's 2003 arguments for an intermediate movement to [Spec, vP] for wh-extraction. Her account relies on two instances (at least) of wh-movement; one to [Spec,vP], the edge of the clause-internal phase, and a second wh-movement to [Spec,CP]. In contrast, the account here relies on smuggling the wh-phrase into the second clausal phase.

English *Do* deletes VP. Essentially, the account will boil down to the deletion causing a requirement of T to fail to be met-specifically,the uninterpretable ϕ-features of T. First, I will discuss the types of elements that can appear in [Spec, TP], and then I will show that passive in the British English *do* construction does not allow any of these elements to occur in [Spec, TP].

4.5.1. What can occur in [Spec, TP]?

I am glossing over inversion constructions, such as locative inversion. Concentrating on so-called "normal" subjects, we find argument DPs, as in (79a), expletive *it* (79b), and expletive *there* (79c).

(79)
(a) John likes pizza.
(b) It is obvious that John likes pizza.
(c) There are five people in the room.

A non-expletive argument in [Spec, TP] will value and delete T's ϕ-features; as McCloskey 1991 argues, *it*-expletives have a full set of ϕ-features. However, like *there*-expletives, they have a restricted distribution cross-linguistically. For example, English, unlike French, does not allow DPs to link to *it*-expletives:

(80) Il est allé l'homme.
It is gone the man.
'The man is gone.'
(81) *It is gone the man.

Finally, Chomsky 1995 has argued that *there*-expletives lack a full set of ϕ-features, having only a person feature. Therefore, the "associate" of a *there*-expletive is needed to value T's ϕ-features:

(82) There are five people in the room.
(83) *There rained.

In sum, something needs to occur in [Spec, TP] in English in order to value T's ϕ-features. It is a failure to satisfy this need that causes the incompatibility between British English *do* and the passive construction, as I will now document.

4.5.2. The Analysis of Passive

I assume Collins' 2005 analysis of passive, whose salient points I will now summarize and illustrate :[23](i) projections of both Voice and v; (ii) a projection PartP, which is selected either by auxiliary *have* or by v; (iii) movement of PartP to [Spec, VoiceP] when Voice is passive; (iv) generation of *by* in $Voice^0$ when passive. I will modify Collins' analysis slightly, motivating my two modifications, before illustrating the interaction with British English *do*.

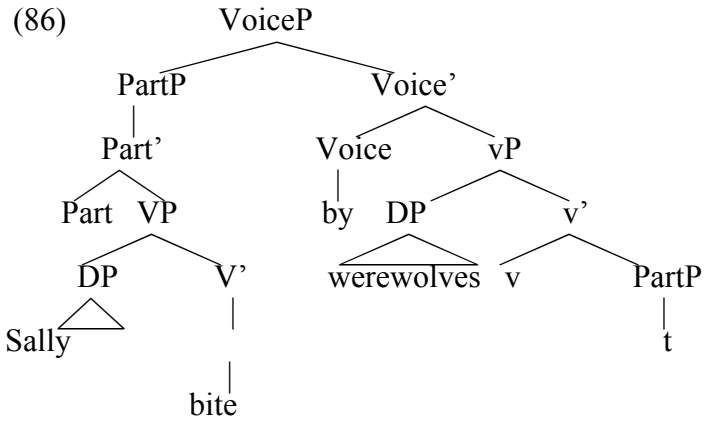
For example, (84) would have the following analysis in this system.

(84) Sally was bitten by werewolves.
(85)(a) Merge VP
(b) Merge VP with $Part^0$, creating PartP;

[23] For supporting arguments, I refer the reader to Collins 2005.

(c) Merge PartP with v;
(d) Merge werewolves in [Spec,vP], closing off vP;
(e) Merge Voice [Passive] with vP;
(f) At this point, PartP moves to [Spec, VoiceP], closing off VoiceP:

(86)



One primary point to notice about this analysis is the fact that the original subject remains in situ, within the complement of Voice, while the internal argument of the verb occurs at the edge of VoiceP. If VP deletes in the syntax when it merges, this alone will rule out the passive in this construction, for there will be no element that can raise to [Spec, TP] to value T's uninterpretable ϕ-features; *there* lacks a full complement of ϕ-features, *it* requires a clausal complement, and there is no argument that can raise to [Spec, TP]. Somewhat redundantly, there would be nothing to which to affix the participle. Let us then see what the form would be if *do* were the instantiation of v:

(87) *was en by werewolves do.

In other words, there would simply be no way to derive a sentence with VP-ellipsis, the crucial component of British English *do*, under the view of ellipsis that is assumed here; the deleted constituent, while small, contains some of the necessary ingredients for the passive: the internal argument to move to [Spec, TP], as well as a verb to which the participial morphology must affix.[24] Deletion of the VP at the point of merge

[24] In fact, I believe that it is possible to modify Collins' analysis of passive, while continuing to rule out the passive with the British English *do* construction; the identification of PartP as the verb phrasal constituent that moves for the passive construction requires a completely separate movement in the active construction to [Spec, VoiceP] (i.e., of vP). It would be desirable to unite the movement to [Spec, VoiceP] in both the active and passive voices. Furthermore, Collins cites Kiswahili as a language that transparently exhibits a passive voice morpheme, but notes that this language does not exhibit participial morphology on the passive. Therefore, the cross-linguistic difference between the moved elements that Collins must posit would seem to place a burden on the English language learner. It would therefore be desirable to simply move the vP in both the active and passive constructions in English.

On the other hand, Collins has a straightforward account of why the underlying subject does not appear in [Spec, TP] in the passive construction; it remains behind in the vP, while the lower PartP moves to [Spec, VoiceP].

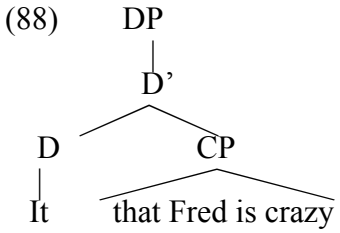
will deprive the participle of a verb to which it would affix, as well as anything to move to [Spec, TP].

In fact, this account of British English *do* will enable us to resolve a question about the analysis of extraposition constructions, as in (87):

(87) It is obvious that Fred is crazy.

These constructions came to the fore in generative grammar with the publication of Rosenbaum's dissertation (Rosenbaum 1967). In Rosenbaum's analysis, the expletive and the clausal argument to which it is linked were co-generated as a constituent (Rosenbaum would generate constructions such as (87) with phrase-markers in which the clausal argument plus expletive formed a subject, and the clause would move rightward, but this doesn't concern us here). An updated version of Rosenbaum's analysis would posit the structure in (88) for the combination:

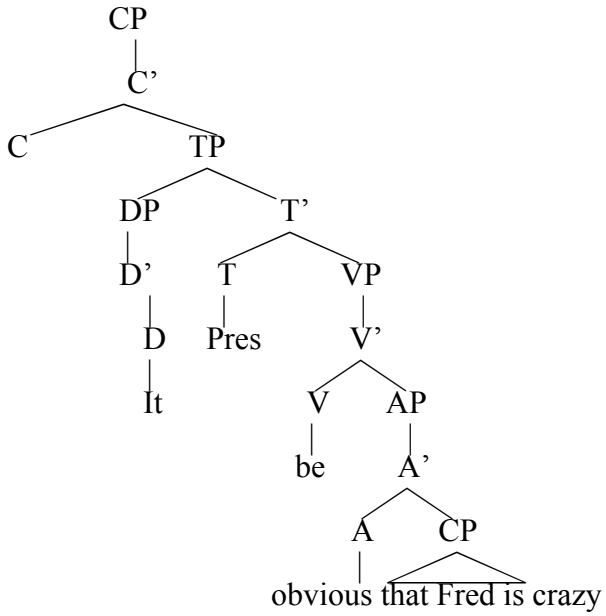
(88)



Another view of extraposition constructions that seems a priori plausible is that the expletive and clausal argument are never generated as constituents, but rather both are generated where they are (call this the "what you see is what you get" hypothesis). In that view, the original structure for (87) would be (89):

One way to get this result is to move the underlying subject to [Spec, AgrP]. There is, in fact, precedent for this cross-linguistically. McCloskey1996, arguing against his and others' earlier view that Irish subjects remain in situ, notes that the subject can precede certain low adverbs. The verb, on the other hand, is still taken to move to some position in the middle field. If the subject moves to [Spec, AgrP] in both English (in the passive construction, when *by* occupies Voice) and Irish, we can still prevent the underlying subject from moving to [Spec,TP].

(89)



Interestingly enough, the extraposition construction is impossible with British English *do*, according to my consultants:

(90)* It wasn't generally suspected at that time that Fred was a traitor, but it will be done when my article hits the stands.

The verb *suspect* is a stative, which is incompatible with the active *do it* anaphora:

(91)*Although we didn't suspect at that time that Fred was a traitor, we did it when the article hit the stands.

(90) is therefore not the passive of *do it*, but an example of passive with British English *do*, which does, as we have seen, occur with statives in the active voice.

If I am right that the failure of British English *do* to occur in the passive is due to a failure to value T's ϕ-features, an immediate question to ask is why (90) is ungrammatical. After all, McCloskey 1991 has shown that *it* has a full complement of ϕ-features, and we know that *it* can appear with clausal arguments. One possibility is that *it* must form a chain with its associate, but McCloskey 1991shows convincingly that *it* does not form a chain with its associate.

If we take *it*-expletives to be co-generated with their associates, as in (88), we have a natural account of the impossibility of *it*-expletives occurring as passive subjects in the British English *do* construction, as in (90). The expletive *it* would be generated within the DP, an updated version of Rosenbaum 1967, as a sister to the clausal complement; the entire combination would be located within VP, the normal position for verbal complements. If the VP deletes within the syntax, the deletion of the verbal complement will occur too early for *it* to participate in formal operations within the larger clausal structure.

In short, the analysis of British English *do* that I am advocating, in which it

involves deletion of a small constituent at the time of its creation, with the concomitant effects on its daughters, will automatically cause the results of deletion to fail to mesh with the structure's requirements in the passive construction. Deletion deletes a VP, and if the subject is generated in [Spec,vP] and remains there in the passive construction, or moves to [Spec, AgrP], it will, in any event, be within the complement of the VoiceP, and not at the phase edge; if there is no internal argument at the phase edge, there will be no argument that can raise to [Spec, TP]. As a result, T's requirements will be violated, and the derivation will crash.

4.6. Ellipsis-Containing Antecedents

This analysis accounts for ellipsis-containing antecedents, as in (21), repeated here:

(21) When John has to cook he doesn't want to, and when he has to clean, he doesn't ___either.

The nature of the identity that is required for ellipsis has been a subject of some controversy; one school of thought holds the identity to be semantic identity (Dalrymple, Pereira, & Schieber 1991, Hardt 1999), while another takes the identity to be syntactic identity(Fiengo & May 1994, Chung 2005).

However, some notion of identity is thought to be required, and seems abundantly well-justified.

In view of this agreement, the phenomenon of ellipsis-containing antecedents is all the more remarkable.

There are two ellipses in (21), both of which need to be interpreted, but before we proceed to the details of how this sentence is interpreted, let us be clear about the interpretation of the sentence that is of interest: Although John didn't clean because he had to clean, he cooked because he had to cook. To schematize the situation, let us represent (91) with indices:

(92) Although John didn't clean_i because he [had to $\_\_\_\__i]_j$, he cooked_k because he did$[_____k]_j$

There are two main ellipses, represented by the bracketed phrases, *have to*____, the antecedent (given index j), and *did*(also with index j); the fact that the two main ellipses are co-indexed reflects their intended identity. However, each of the two VPs itself contains an elided VP that requires reconstruction, and it is here that things get interesting for the view of ellipsis that requires identity. The main antecedent VP requires reconstruction of the VP *clean*, while the main elided VP requires reconstruction of the VP *cook*. Therefore, the main elided VP is partly identical with its main counterpart in the primary subordinate clause, but is also partly identical with the main VP in its own clause.

The solution to this problem of identity has a natural home in the theory of deletion that is proposed here. Baltin & Van Craenenbroeck in preparation argue that a deleted phrase will be in a configuration that automatically makes it a pro-form. Therefore, if the antecedent phrase contains a pro-form, and the deleted phrase contains a deletion in the corresponding position, the antecedent and the ellipsis candidate will be identical except for pro-forms in corresponding positions. In short, ellipsis-containing antecedents would really be a case of "alphabetic variants", as proposed by Sag 1976 in a now-standard account of sloppy identity.

All ellipses with which I am familiar meet this criterion, as do pronouns. In the case of VP-ellipsis, the relevant functional head is usually T,the aspectual verbs *have* and *be* (which plausibly head Aspect projections), and M (taking *to* to be a modal).and, in the case of British English *do*, Kratzer 1996 has argued for v's (her Voice) functional status. If deletion applies in the syntax, the complement will disappear immediately for syntactic computations, including binding.

A salutary consequence of this analysis is that it readily accounts for Elbourne's 2008 observation that when the antecedent VP does not itself contain a corresponding deletion, ellipsis-containing antecedents cannot occur, as in (92)(Elbourne 2008, (82)):

(92) When John had to cook, he didn't want to cook. When he had to clean, he didn't either.

In terms of the present analysis, non-deletion of the VP causes it not to be a pro-form, but a constant, and therefore reconstruction of the entire deleted VP in the main clause of the second sentence would cause it to fail to be an alphabetic variant. Hence, the deletion would fail the requisite identity relation.

One point emerges from a consideration of ellipsis-containing antecedents, however, viewed from this perspective; the deletion that is involved (traditional VP-ellipsis, analyzed here as VoiceP-ellipsis) has semantic consequences, and is not simply a matter of failing to pronounce the un-pronounced phrase. In other words, a view of ellipsis as being registered at the level of Phonetic Form will not account for the semantic effects of deletion that are posited here.[25]

5. Why is VP-Ellipsis Obligatory Following *Do* (as v)?

This question seems odd from a certain perspective, certainly from the perspective of the answer that I will adopt, which is that

(93) *Do* is a pro-form.

Recall that I am taking a pro-form to be a functional head whose complement is missing. In a certain sense, Postal's original observations, while perhaps leading to an ultimately correct conclusion,led to an incorrect immediate inference. He took the case of what looked liked pronouns immediately preceding overt nominals and concluded that they were representative of the general class of what we call pronouns. From this

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[25] I should note, however, that Aelbrecht overall proposes a variant of the PF-deletion that seems to allow for many of the interactions for which I am arguing here. She views ellipsis as non-pronounciation at PF, but allows for elements to be shunted off to PF before the completion of a phase. Once an element has been transferred to PF, following Chomsky 2000, it is no longer accessible to syntactic operations.

Space does not permit me to evaluate this proposal, and it is too recent to fully digest. However, it seems like an extremely interesting proposal, and I hope to discuss it more fully in future work. I suspect that part of any comparison between this proposal and the syntactic deletion approach will require a discussion of which proposal should be the null hypothesis. In other words, is the PF-deletion approach worth rescuing to the extent that Aelbrecht is proposing? Another consideration will,of course, be further empirical data that each proposal will have to deal with.

perspective, the pronouns that can't immediately precede nominals (i.e., the 1st and 3rd person singulars) need explanation.

As I showed in the last section, even the forms that overtly precede nominals do not act as pro-forms; *we linguists* does not behave as a pronoun for the binding theory, but rather an R-expression. Therefore, it does not seem quite accurate to view the *we* as a pronoun before an overt nominal. Rather,it is simply a determiner in that construction. We can view it as being underspecified for the environment in which it appears, taking the lexical entry in (126) as specifying its syntactic privileges of occurrence[26]:

(94) *we*, D, [+Ist, +Sg.], + [_____]

On the other hand, we can take *he*, which does not allow a following nominal, to have the lexical entry in (95):

(95) *he*, D, [+1st, Sg], +[____#] (with # meaning "final in its projection")

I take no stand here on this as a hypothesis about the actual mechanism for expressing these generalizations; one could just as well implement them as conditions on vocabulary insertion, in the framework of Halle & Marantz 1993. It is clear, however, that syntactic environment determines lexical form.

In that sense, then, one could account for the difference between *do* and empty v as reflective of the following lexical entries:

(96) *do*, v, +[_____#]

(97) 0, v, +[_____V]

I realize that this looks like a brute-force solution, but, in the absence of a deeper explanation, I would simply note that the phenomenon seems ubiquitous in syntax, with local environment determining syntactic form, and this seems to be just one more instance.

6. Conclusion

In this paper, I have tried to show two things that are intertwined:(i) the distinction between pro-forms and deleted constituents is too rigid, in that pro-forms involve deletion in their formation;(ii) deletion applies much earlier than has been thought, in the overt syntax, and is not simply non-pronunciation, or a deactivation of the phonology, at the level of PF. I have tried to substantiate both of these claims by analyzing in detail one ellipsis construction, British English *do*, and bringing its properties into line with other elliptical constructions. The upshot of this paper is that different constructions that seem to involve deletion involve differing degrees of evidence for internal structure, an observation that has not even been made before, let alone explained. By allowing deletion to occur in the syntax, and to allow elements of different sizes to delete, we can begin to explain the different degrees of permeability of different constituents.

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[26] Oana Savescu (personal communication) has informed me that 1st and 2nd person accusatives in Roumanian seem to behave as NPs, rather than as DPs. Going along with this idea, in English, accusatives of 1st and 2nd person allow adjectives to precede them and relative clauses to follow them, along with overt determiners in the latter construction: *lucky us*, and *the us that people like*. Both possibilities are, of course, impossible in the nominative, a fact that could readily be accounted for if the nominatives were instances of D.

Appendix: *Do So*

An anonymous reviewer has noted that *do so* anaphora allows inverse scope:

(1) Many men read five books, and many women did so as well. (Five>Many, Many>Five)

Interestingly enough, *do it* anaphora does not seem to allow inverse scope, but does allow direct scope:

(2) Many men read five books, and many women did it as well.(Five>Many, *Many>Five).

Hankamer & Sag 1976 note that *do so*, unlike *do it*, cannot be pragmatically controlled, but rather requires a linguistic antecedent, and is therefore classified as a surface anaphor in their terms, meaning that its anaphoricity is transformationally created rather than being present as such from the outset. They do not, however, explain why *do so* is incompatible with wh-extraction, unlike, say, VP-ellipsis; nor do they specify the transformation that is supposed to create the construction.

I will now try to tackle both tasks, borrowing heavily from Ross 1972 and Liptak 2006. Before proposing an analysis, I will compare the *do so* construction with British English *do*, indicating where the analysis of the former should converge on the analysis of the latter, and where it should diverge.

1.Restriction to Verb Type

By "verb type", I mean Vendler's 1967 notion of verb type. As has often been noted (see C.L. Baker 1984 and references cited there), *do so* is restricted to activities and accomplishments, whereas British English *do* is not restricted by verb type; it can appear with statives, for example, unlike *do so*:

(3) John might love Sally, and Fred might {do } too.
{*do so}

2.Licensing

Do so obeys none of the licensing restrictions of British English *do* that were noted in the text. For example, *do so* occurs in infinitives, gerunds, and after reduced auxiliaries, unlike British English *do*:

(4)(a) Bill would prefer to leave, and Fred would prefer to do so as well.
(b) I wouldn't mind Bill's leaving, but I would mind Fred's doing so.
(c) He'll leave tomorrow, and I'll do so today.

I would suggest that the licensor for *do so* anaphora is *so*, a head which takes a deleted phrase as its complement. In this sense, the *so* would be a pro-form, which takes a deleted complement. The salient questions that would be raised would be: (i) what is the categorial status of *do*?; (ii) what is the categorial status of *so*?; (iii) what is the categorial status of *so*'s deleted complement?; (iv) how can one explain the permeability properties of this deleted complement?.

I will now suggest an analysis that tackles these questions.

3.The Analysis

3.1.*Do*

The paper has argued that British English *do* is v. This accounts for the ability of British English *do* to anaphorically refer to any active verb, irrespective of verb type. It seems unwise to extend this treatment to *do so*, which is restricted to activities and accomplishments. If syntax directly maps onto verb type, as seems plausible, we would therefore have to place the *do* of *do so* in a different head position than the *do* of British English do.

One consideration that seems relevant is that, in Chichewa, Baker 1988 glosses the following sentence in which verb incorporation has not applied (Baker 1988, (35a)):

(5) Mtsikana a-na-chit-its-a kuti mtsuko u-gw-e.
girl do-cause that waterpot fall
'The girl caused that waterpot to fall.'

The morpheme *chit* is glossed as *do*, affixed to the (presumably verbal) root *its*, glossed as 'cause', suggesting that *cause* by itself is insufficient to express the full notion of causation. It has often been noted that the notion of causation in,e.g., English causatives, such as transitive *drop*, is more specific than simple causation, and involves direct causation.

If (5) denotes direct, agentive causation, one way to account for the distinction between agency and simple causation is the postulation of a higher head, specifically denoting agency, above v. *Chit* in Chichewa would occupy this head position, and this would be an updated version of Ross's 1972 suggestion that English activity and accomplishment verbs are embedded as the complements of a higher *do*. In short, we would posit the sequence Voice- Agency-v- VP as the relevant projections within the clause-internal phase.

One significant modification of Ross's analysis is necessary here. Ross analyzed the subject of *do* as a controller (in current terminology) of PRO, but we might re-cast Ross's conclusion in terms of Hornstein's 1999 reduction of control to raising, in which case the element in[Spec of Agency], where agents reside, might actually be raised to that position from [Spec, v]. This view of agents as having been raised to that position will play a role in my account of inverse scope.

3.2. *So*

Liptak 2006 proposes a polarity focus for Hungarian, which expresses either agreement with a previous assertion or disagreement with that assertion, labeling this as a verum focus phrase. Exporting this analysis to English, it is tempting to identify *so* as a positive verum focus, denoting agreement, as in the following:

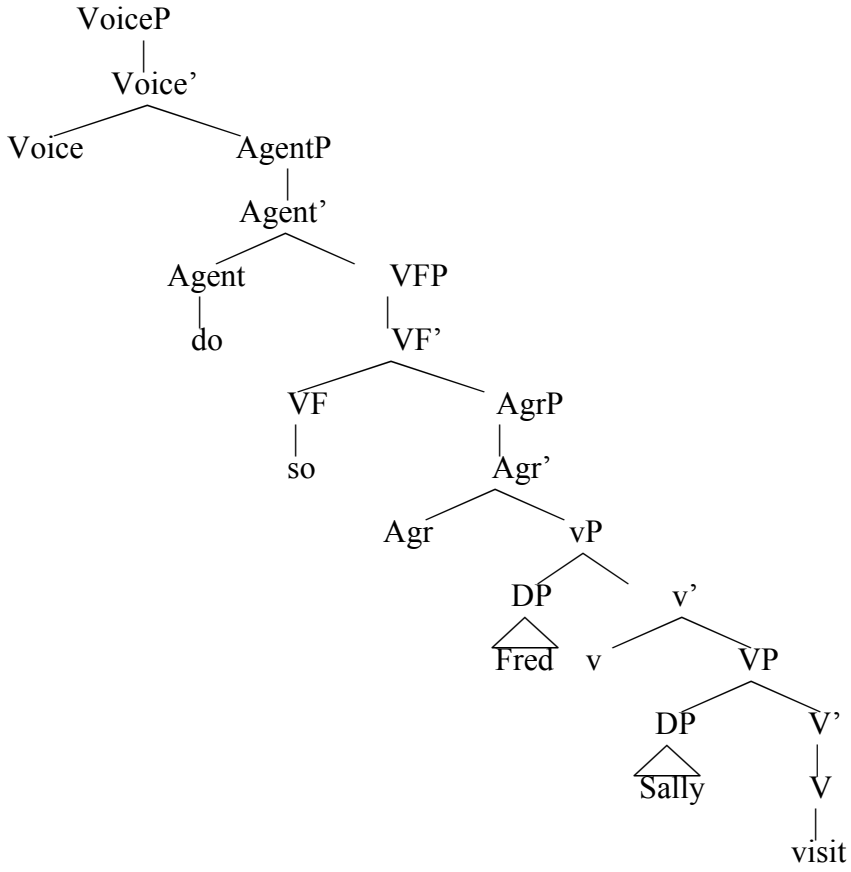
(6) I {think} so.
{guess}
{hope }

3.3 Putting It All Together

I would propose that the underlying structure of the clause-internal phase in the second conjunct of (7) is (8).

(7) John will visit Sally, and Fred will do so, as well.

(8)



The derivation then proceeds in the way that we have seen in the body of this paper: (i) Move DP *Sally* to [Spec, AgrP]; (ii) Raise DP *Fred* to [Spec, AgentP]; (iii) delete AgrP.

Step (ii), raising of the subject to [Spec, AgentP], bears comment, because it does not pass the usual diagnostics for raising (idiom chunks, expletives, etc.), any more than Hornstein's (1999) cases of obligatory control as raising do. In both cases, the answer is the same: raising to a θ-position imposes restrictions on the raised element. In this case, the DP must be a possible agent. I must adopt Hornstein's view at least partially, in which control is really raising to a θ-position, but I do not adopt his view of control totally, for the following reason. When obligatory control occurs within an island, such as an infinitival question, inverse scope is impossible:

(9) Some man wondered whether to read every book.(Only direct scope possible).

(9) should be contrasted with (1), which does allow inverse scope. I would explain this contrast by adopting Hornstein's1995 analysis of scope, as being read off of A-chains. A raising analysis of the *do so* construction, in which the agent is raised from [Spec, vP], would allow the object in [Spec, AgrP] to c-command the subject at the point at which the object moved there, allowing c-command at that point and hence inverse scope.

On the other hand, if the obligatory control in infinitival questions were really a case of PRO deleting, as I happen to believe, rather than raising, the object in [Spec,

AgrP] would not c-command the subject, which has been deleted. Therefore, inverse scope would be impossible in infinitival questions.

Wh-extraction will be impossible in the *do so* construction for the same reasons that it is impossible in the British English *do* construction; it must take place within [Spec,VoiceP], and the wh-phrase has been rendered ineligible for formal operations by the time that [Spec, VoiceP]is encountered.

This analysis has the virtue of bringing *do so* more into line with Hankamer & Sag's original insight that it is a surface anaphor, in their terms. They never explained why, if it was, it failed to exhibit the same degree of permeability as, e.g. VP-ellipsis. The analysis here shows some similarity with the British English *do* construction, in that permeability is partially exhibited in both constructions (inverse scope and A-movement for *do so*, and just A-movement for British English *do*), but I have tried to account for why different ellipsis processes show different degrees of permeability.

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