14   What VP Ellipsis Can Do, and What it Can't, but not Why

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0   Introduction

VP ellipsis is the name given to instances of anaphora in which a missing predicate, like that marked by "▲" in (2), is able to find an antecedent in the surrounding discourse, as (2) does in the bracketed material of (1):

(1)   Holly Golightly won't [eat rutabagas].

(2)   I don't think Fred will ▲, either.

We can identify three subproblems which a complete account of this phenomenon must solve:

(3)   a.   In which syntactic environments is VP ellipsis licensed?
       b.   What structural relation may an elided VP and its antecedent have?
       c.   How is the meaning of the ellipsis recovered from its antecedent?

These tasks tend to run together, as we shall see; but there is no immediate harm in treating them separately.

1   Licensing the Ellipsis

The first of the problems presents itself with pairs such as (4):

(4)   I can't believe Holly Golightly won't eat rutabagas.
       a.   I can't believe Fred won't ▲, either.
       b.   *I can't believe Fred ▲, either.

These contrasts are typically thought to involve licensing conditions that the environment to the left of the ellipsis invoke. The contrast between (4a) and

(4b), for instance, indicates that the ellipsis site must be in construction with, or perhaps governed by, a member of "Aux," where these can be understood to be just those terms that are able to occupy the highest of the functional projections which clauses are made up of. The modal, *won't*, is an Aux, as are the infinitival *to* and the auxiliaries *have*, *be*, and *do* in (5):

(5) a. José Ybarra-Jaegger likes rutabagas, and Holly does ▲ too.
     b. José Ybarra-Jaegger ate rutabagas, and Holly has ▲ too.
         José Ybarra-Jaegger should have eaten rutabagas, and Holly should have ▲ too.
     c. José Ybarra-Jaegger is eating rutabagas, and Holly is ▲ too.
         José Ybarra-Jaegger has been eating rutabagas, and Holly has been ▲ too.
     d. Mag Wildwood wants to read Fred's story, and I also want to ▲.

Lobeck (1995: 155ff) and Potsdam (1996b) argue that the sentential negator, *not*, also licenses an ellipsis, as indicated by (6), and so might be considered a member of Aux too:[1]

(6) a. John is leaving but Mary's not ▲.
     b. I consider Bill intelligent and I consider Sally not ▲. (Lobeck 1995: (38c), 156, Potsdam 1996b: (123a), 51)[2]

Note that these examples also demonstrate that the licensing Aux need not actually be in the highest functional projection; that is, they need not be the term that bears finite morphology in finite clauses. (And (6b) also shows that "VP ellipsis" can affect a wider class of predicates than just VPs; see Baltin 1995.) That Auxs differ from other verbal elements in being able to license VP ellipsis is indicated by the contrast these examples have with (7):[3]

(7) a. *Sally Tomato started running down the street, but only after José started ▲.
     b. *Sally Tomato made Mag laugh, and then José made ▲.

The first step in formulating an account of the licensing conditions on VP ellipsis, then, is to distinguish Auxs from everything else. The second step is to determine why *to* does not always license an ellipsis: (8), for instance, differs from the seemingly similar (5d):

(8) *Mag Wildwood came to read Fred's story, and I also came to ▲.

Lobeck (1987b, 1992, 1995) suggests that the contrast in (8) shows that *to* is by itself unable to license an ellipsis. Being an Aux is therefore not enough to license VP ellipsis. Instead Lobeck argues that it is also necessary that the ellipsis site be head governed by a term related to tense. If we assume that

to is not a head governor of this sort, then the ungrammaticality of (8) is accounted for. The grammaticality of (5d) would then have to be captured by finding another head governor for the ellipsis. Lobeck suggests *to* is in circumstances like these able to form a government chain with the tense in the higher clause, thereby becoming a licit head governor. She exploits the Government Transparency Corollary, an innovation of Baker's (1988), which allows one head to govern from the position of another when they have Incorporated. She suggests the Government Transparency Corollary should be extended to terms that do not overtly Incorporate, but undergo a kind of covert version of this process. This is what she suggests happens with *to* and the higher tense. Thus, the ellipsis in (5d) satisfies the head government requirement if *to* is able to form a government chain, through *want*, with the tense of the root clause. In (8), however, because the infinitive is an adjunct, the government chain with *to* out of the infinitive will be blocked, in the same way as overt Incorporation would be, and, as a consequence, the elided VP will not become head governed by a term associated with tense.[4]

Zagona (1988a, 1988b) argues, by contrast, that the difference between (5d) and (8) is not due to licensing conditions on VP ellipsis, but instead follows from licensing conditions on *to*. She suggests that *to* must be phonologically bracketed with preceding material when the VP following it is elided – following in this respect Zwicky (1981). Like Lobeck, she assumes that this rebracketing is allowed only when *to* is able to gain proximity to its host; she explicitly resorts to head movement to bring *to* into this proximate position. Hence, the contrast between (5d) and (8) comes about in a parallel way for Zagona: rebracketing is possible in (8) because *to* can undergo head movement to *want*, and impossible in (5d) because head movement to *came* is blocked.

One empirical difference between the two proposals hinges on whether proximity to a term capable of head government is required or not. For Zagona, all that is necessary is that *to* find a method of moving close to some phrase or another; for Lobeck, however, *to* must be able to gain proximity to tense. Zagona cites the grammaticality of examples such as (9) in support of her proposal; Lobeck points to the marginality of (10) in support of hers:[5]

(9)   John wants to go on vacation, but he doesn't know when to ▲. (Zagona 1988a: (21), 101)

(10)   a.   *We wanted to invite someone, but we couldn't decide who to ▲.
     b.   *Mary was told to bring something to the party, so she asked Sue what to ▲.
     c.   *We might go on vacation if we can ever figure out when to ▲.
     d.   *Ron wanted to wear a tuxedo to the party, but Caspar couldn't decide whether to ▲. (Lobeck 1995: (26), 175)

In these cases, *to* is embedded within an indirect question, which is an environment thought to be an island. Exploiting this feature of the examples, Zagona

suggests that *to* in (9) remains within the infinitive, moves into C°, and thereby gets close enough to *when*, which sits in Specifier of CP, to rebracket with it. Lobeck also exploits the island-hood of indirect questions and suggests that the ungrammaticality of (10) shows that *to* must form a government chain (a process that is interrupted by islands) out of the infinitive to license the ellipsis.[6] Alas, the difference between (9) and (10) remains puzzling, hampering a decision between the two approaches. But it should be noted that the judgments in (10) are somewhat variable; to my ears, (10d) is considerably better than (10b), for instance.

A much stronger contrast is the one in (11), from Zwicky (1981) and discussed in Lobeck (1995):[7]

(11) a. You shouldn't play with rifles because it's dangerous to ▲.
      b. *You shouldn't play with rifles because to ▲ is dangerous. (Lobeck 1995: (2), 165)

An elided VP cannot be licensed by *to* when the infinitive that *to* heads is in subject position. For both Zagona and Lobeck this will follow from *to*'s need to have the proper relationship to the head on its left. For Zagona, the Generalized Left Branch Condition will prevent *to* from moving out of the subject to get close enough to *because*; and for Lobeck, a similar constraint will block forming a government chain between *to* and the tense in the higher clause.

So, summarizing, in finite clauses, an elided VP is licensed when governed by an Aux. When the ellipsis is governed by an infinitival *to*, there is an additional requirement which, apparently, forces *to* to be "close" to certain other terms. If Zagona and Lobeck are right, "close" is measured in terms similar to those holding of head movement.[8]

There are other known constraints on VP ellipsis which, nonetheless, resist being incorporated into this description of its licensing condition. For example, Sag (1976: ch. 1) argued that VPs elide quite badly when the Aux governing them has *ing* suffixed to it:[9]

(12) a. *Doc Golightly is being discussed and Sally is being ▲ too.
      b. *I remember Doc being discussed, but you recall Sally being ▲.

And for many speakers, VPs headed by *have* resist ellipsis, perhaps because these VPs always fail the licensing condition. The example in (13), for example, does not easily have an interpretation in which the elided VP is understood to be *have eaten rutabagas* (instead, the somewhat strained *eat rutabagas* seems to be the only possibility):[10]

(13) Sally might have eaten rutabagas, but Holly shouldn't ▲.

What we search for, then, is an account of VP ellipsis that explains why it can be expressed in just those environments governed by an Aux, with the caveats just reviewed.

Before we go any further, however, it is probably relevant to note that linguistic theory banned notions such as VP ellipsis in the late 1970s or so. Gone are all such constructions, and with them their parochial constraints and conditions. Instead, the phenomena which labels like "VP ellipsis" were constructed around are thought to emerge from the interaction of more general processes and constraints. The process VP ellipsis makes use of is, well, ellipsis, whose products almost certainly also include "N'-deletion" and "sluicing," constructions in which an NP or IP are elided, as in (14):

(14)   a.   Mag will read Fred's [story], and Joe Bell will read Holly's ▲.
       b.   José asks that [we go to the meeting], and Sally will tell us when ▲.

The licensing condition on "VP Ellipsis" should therefore be tailored not only to the VP instances of ellipsis, but should also govern where NPs and IPs are elidible. Moreover, this condition should explain why VPs, NPs, IPs, and the AP in (6b) are subject to elision but, in general, phrases of other categories are not. Clearly, then, a licensing condition that is based on proximity to an Aux is too narrow; we must find a way of seeing this as the VP-specific version of a more general licensing condition on ellipsis. Anne Lobeck is, to my knowledge, the only one who has made an extended attack on this project, and there is still much work to be done.[11]

The approaches to the licensing condition which Zagona and Lobeck advocate can be seen as related to the sorts of licensing condition that are used to describe the distribution of other empty categories. One might imagine, for instance, that the conditions which license the null pronominal arguments in Romance, or the conditions that determine where traces may be, are part of the same family that the licensing conditions on ellipsis are in. In both the licensing conditions on null pronouns and those on empty categories, there is a part of the condition that refers to a privileged class of head governors, much as the conditions on ellipsis we have been reviewing do. Luigi Rizzi (1993) has suggested that this head governor requirement is the same in the pronoun and trace situations. He proposes that there is a general head government requirement on these kinds of empty category, and it is natural to imagine that this head government requirement could be extended to ellipsis sites as well. Let me call this part of the licensing condition on null pronouns and traces the Empty Category Principle (ECP), after the version of that condition which is thought to govern the distribution of traces. If we imagine that ellipsis is governed by this condition, then there should be a parallel between the positions in which traces of movement are licensed and the positions in which ellipsis is licensed. This is not obviously correct for the general case of ellipsis. It wrongly leads to the expectation that NP and IP movement should be possible, as in (15), parallel to (14):

(15)   a.   *It's *story* that Joe Bell will read Holly's *t*.
       b.   *It's *we go to the meeting*, that Sally will tell us when *t*.

And it leaves unexplained why prepositional phrases, say, can move and leave a trace, but not elide:

(16)   a.   It's *to Mag Wildwood* that Joe said Holly can talk *t*.
         b.   *Joe can talk [to Mag Wildwood] and Holly can talk ▲ too.
              (where: ▲ = *to Mag Wildwood*)

Perhaps there are particularities of the movement process, and the conditions which it invokes (beyond those shared by ellipsis), that can be used to explain these differences. (Saito and Murasugi 1998 suggest such a strategy for the first of these problems.)

   In the specific case of VP ellipsis, however, the match is pretty good. A topicalized VP cannot succeed unless the trace it leaves is governed by an Aux, as the contrast between (17) and (18) shows:

(17)   Madame Spanella claimed that . . .
         a.   *eat rutabagas*, Holly wouldn't *t*.
         b.   *eaten rutabagas*, Holly hasn't *t*.
         c.   *eating rutabagas*, Holly should be *t*.
         d.   *eating rutabagas*, Holly's not *t*.
         e.   *eat rutabagas*, Holly wants to *t*.

(18)   Madame Spanella claimed that . . .
         a.   **would eat rutabagas*, Holly *t*.
         b.   **hasn't eaten rutabagas*, Holly *t*.
         c.   ?**eating rutabagas*, Holly started *t*.
         d.   ?**eat rutabagas*, Holly made me *t*.

This pattern matches the one we have just witnessed for VP ellipsis. It also extends to the otherwise mysterious block on eliding VPs headed by *have*, since these VPs resist topicalization as well:

(19)   *Madame Spanella claimed that *have eaten rutabagas*, Holly should.

What is left unmatched is the prohibition on ellipsis following an *ing* form, a prohibition that is not recapitulated in VP topicalization (see (20)), and the ability of a small clause to elide following *not*, an ability not shared by VP topicalization (see (21)):

(20)   Madame Spanella claimed that . . .
         a.   *?discussed widely*, Holly is being *t*.
         b.   *?discussed widely*, I remember Holly being *t*.

(21)   *Madame Spanella claimed that *intelligent*, I consider Holly not *t*.

Still, this is a pretty close fit, and it encourages thinking of the licensing condition on (VP) ellipsis in terms of the licensing condition on traces.

A very sensible question, if this should turn out to be accurate, is why ellipsis sites and traces should be subject to the same licensing condition. In what respect do ellipsis and movement create similar things? One possibility would be explore the thesis that traces and ellipsis sites simply are the same thing. On some conceptions of ellipsis and movement this is very nearly the case. Wasow (1972), for instance, argues that VP ellipsis consists of a full-fledged VP with no lexical items inserted into it; and this is very much like the Copy and Delete view of movement in Chomsky (1995b), according to which traces are full-fledged exemplars of the moved phrase, but with their lexical items removed. On this view, then, traces would turn out to be essentially ellipsis sites, and the Empty Category Principle could be seen as a condition on ellipsis.

Another approach would reduce VP ellipsis to the syntax of movement, and thereby cause the ellipsis site to contain a trace. Recall that when an ellipsis site is governed by infinitival *to* it is sometimes grammatical and sometimes not. It is ungrammatical when in an adjunct or subject infinitival, and variously so when in an indirect question. When the infinitival clause is in complement position, however, the ellipsis is grammatical. This paradigm is reproduced in (22) and (23):

(22) a. *Mag Wildwood came to read Fred's story, and I also came to ▲.
     b. *You shouldn't play with rifles because to ▲ is dangerous.
     c. ??Ron wanted to wear a tuxedo to the party, but Caspar couldn't decide whether to ▲.

(23) a. Mag Wildwood wants to read Fred's story, and I also want to ▲.
     b. You shouldn't play with rifles because it's dangerous to ▲.
     c. It's possible for you to play with rifles, and it's possible for me to ▲ too.

We can add to this that VP ellipsis in an infinitival clause buried within an NP is not good either, as in (24):[12]

(24) a. *Lulamae Barnes recounted a story to remember because Holly had also recounted a story to ▲.
     b. *?I reviewed Joe's attempt to find Holly while you reviewed José's attempt to ▲.
     c. *?Madame Spanella questioned Mag's desire to eat rutabagas, but only after I had questioned Sally's desire to ▲.
     d. *?Sally explained the attempt to arrest Holly, but only after I had denied the decision to ▲.

So, roughly: VP ellipsis cannot strand infinitival *to* when the infinitive that *to* heads is an island (the possible exception to this being the case of indirect

questions, as we have seen). This sensitivity to islands, incidentally, is not found for VP ellipses in finite clauses (as Sag 1976 observes):

(25)   a.   John didn't hit a home run, but I know a woman who did ▲.
       b.   That Betsy won the batting crown is not surprising, but that Peter didn't know she did ▲ is indeed surprising.
       c.   Lulamae left although Mag didn't ▲. ((a) and (b) from Sag 1976: (1.1.8–9), 13)

   Now on Zagona's approach to these facts, recall, the reason for this paradigm has to do with the defective nature of *to*. It must move to something it can cliticize to when it embeds an elided VP. It is this movement which is responsible for the island effects. I am skeptical, however, that the cause of the finite/non-finite contrast has to do with the defective nature of *to*, because the same paradigm emerges when the ellipses in infinitival clauses are governed by auxiliary verbs. I do not find a contrast in grammaticality between (22) and (26):[13]

(26)   a.   *Mag Wildwood came to be introduced by the barkeep and I also came to be ▲.
       b.   *You shouldn't have played with rifles because to have ▲ is dangerous.
       c.   ??Ron wanted to be wearing a tuxedo to the party, but Caspar didn't know whether to be ▲.
       d.   *Lulamae recounted a story to be remembered because Holly had recounted a story to be ▲.

I think what we search for, then, is something that distinguishes ellipses in infinitival clauses from ellipses in finite clauses, irrespective of the Aux which governs them. That is, we should not blame *to* on the island effects.
   Imagine, instead, that VP ellipsis is licensed by VP topicalization. That is, suppose that for a VP to elide it must first topicalize. This, of course, would directly account for why the conditions on VP topicalization and VP ellipsis are so close. But it will also account for the finite/non-finite differences we have just reviewed, because topicalized VPs cannot land inside an infinitival clause in the way that they can in finite clauses:

(27)   a.   ?Lulamae decided that *eating rutabagas*, she should be *t*.
       b.   *Lulamae decided *eating rutabagas*, to be *t*.

Consequently, when a VP in an infinitival clause topicalizes, it must leave that infinitive to find a finite clause to land in. The ellipsis in (23a), for example, would then have the pre-ellipsis representation in (28):

(28)   *read Fred's story*, I also want to *t*.

And the ungrammatical examples of ellipsis in (22) and (24) will have the equally ungrammatical pre-ellipsis representations in (29):

(29) a. *You shouldn't play with rifles because *play with rifles* [to *t*] is dangerous.
      b. ??Ron wanted to wear a tuxedo to the party, but *wear a tuxedo to the party* Caspar couldn't decide whether to *t*.
      c. *Lulamae Barnes recounted a story to remember because *remember* Holly had recounted a story to *t*.

So the island effects we have seen for VPs elided in infinitival clauses can now be traced back to the fact that VPs in infinitival clauses are forced to move out of that infinitival clause, and this movement is subject to island constraints. Moreover, the somewhat variable effects that we have seen in indirect questions – the difference between (9) and (10), for instance – might be traced back to the fact that the *wh*-island constraint is itself quite variable.[14]

   If this approach is correct, it suggests a reworking of the licensing conditions on VP ellipsis. The elided VPs in this account are no longer in the positions earlier thought – these positions are instead occupied by the elided VP's trace. Rather, elided VPs stand in a topic position, and therefore the licensing conditions on VP ellipsis should be sought here. This proposal, then, gives VP ellipsis an analysis parallel to the topic drop phenomenon that Huang (1984), among others, discusses.

   Alas, this alternative proposal has the shortcoming that it does not explain why the island effects in infinitival clauses are lifted when those infinitival clauses house sentential *not*; (30) is an improvement on (26):[15]

(30) a. Mag Wildwood came to introduce the barkeep but I came (precisely) not to ▲.
      b. You should unload rifles because not to ▲ is dangerous.
      c. If Ron knows whether to wear a tuxedo, and Caspar knows whether not to ▲, do they know different things?
      d. Lulamae recounted a story to remember because Holly had recounted a story not to ▲.

Nor will this proposal gain ground on understanding why elided VPs cannot be governed by *ing* forms. In neither case is there a match with parallel constraints on VP topicalization.

   VP ellipsis seems, then, to be subject to a licensing condition which recalls conditions on traces. However, this is not obviously an idea one would have after looking at the licensing condition on the ellipsis of other categories, and so there still remains the challenge of folding the conditions that license elided VPs in with the conditions that license ellipses in general. But if this can be done satisfactorily, it suggests that we should treat ellipses as the same kind of thing a trace is, or, alternatively, that we derive VP ellipsis by way of movement, perhaps in one of the ways just described.

2   Finding the Antecedent

Our second subproblem is to find the conditions which govern where a VP may be for it to serve as antecedent. This is not a well-studied topic, perhaps because there are very few such conditions. Like other forms of anaphora, VP ellipsis (and ellipsis in general) holds over discourses (as (1)/(2) demonstrate), and therefore the placement of antecedents does not seem to be subject to many syntactic conditions.

Nonetheless, there do seem to be some constraints on how the antecedent and elided VP may be structurally related. The question of interest is: are these conditions peculiar to ellipsis phenomena, or are they found in other expressions of anaphora as well? If the latter, then a theory of ellipsis should not be held responsible for explaining them.

For example, while Ross (1967a) finds that elided VPs cannot find antecedents if they command the ellipsis; he suggests that this follows from his more general condition on Backwards Pronominalization.[16] He illustrates the constraint with the contrast in (31),[17] which matches the similar contrast in (32). (I bracket the intended antecedent VPs.)

(31)   a.   If I can ▲, I will [work on it].
      b.   *I will ▲, if I can [work on it]. (Ross 1967a: (5.173), 369)

(32)   a.   If she$_1$ can work, Mag$_1$ will work.
      b.   *She$_1$ will work, if Mag$_1$ can work.

But Sag (1976: 346ff) suggests that these are different phenomena. The condition operative in (32) is not a condition on antecedence, but rather one on expressing "coreferent" relations, as Lasnik (1976) establishes. Thus, even if *she* is provided with an antecedent that is not commanded by it, (32b) does not have the interpretation indicated:

(33)   Mag$_1$ is a workaholic. *She$_1$ will work, if Mag$_1$ can work.

The condition responsible for (31), on the other hand, is a condition on antecedence. The ungrammaticality of (31b) is alleviated if a non-commanded antecedent is provided. Sag demonstrates this with the paradigm in (34):

(34)   a.   *He did ▲ when they asked him to [leave].
      b.   Did Harry [leave]?
           He did ▲ when they asked him to leave. (Sag 1976: (50) and (52), 346)

Therefore, it does not seem that the ungrammatical instances of backwards ellipsis can be reduced to the backwards pronominalization phenomenon.

Still, the condition responsible seems likely to be grounded in general requirements on anaphora, and not ellipsis specific ones; witness the similar patterns in (35):[18]

(35)   a.   ?*He did so when they asked him to [sing].
             ?*He did it when they asked him to [sing].
       b.   Does Joe [sing]?
             He did so when they asked him to sing.
             He did it when they asked him to sing.

In these cases it is an overt anaphoric VP that seems to be subject to the non-command requirement, and, like the VP ellipsis cases, this is a condition on antecedence, not coreference, as (35b) indicates.

Another context in which conditions on antecedents specific to VP ellipsis might be found arise in cases, like (36), first broached by Wasow (1972):

(36)   a.   *A proof that God [exist]s does ▲.
       b.   *A proof that God does ▲ [exist]s. (Wasow 1972: (16), 93)

In an unpublished paper, Christopher Kennedy has suggested that the ungrammaticality of these examples has the same source as the ungrammaticality of (37):[19]

(37)   a.   *Every man who said George would [buy some salmon] did ▲.
       b.   *I [visited every town in every country I had to ▲].

These cases, he notes, contrast with the similar (38):

(38)   a.   Every man who said he would [buy some salmon] did ▲.
       b.   I [visited every town I had to ▲].

Kennedy offers the generalization in (39) as a description of what distinguishes the examples:

(39)   Ellipsis between VP_α and VP_β, VP_β contained in an argument A_α of VP_α, is licensed only if A_α is identical to the parallel argument A_β of VP_β. (Kennedy 1994: (5), 2)

Note that in (37b) and (38b) the antecedent VPs contain the elided ones. These are instances of so-called "Antecedent Contained Deletions." Antecedent Contained Deletions present a, perhaps independent, problem: the bracketed VPs do not have the right form to serve as antecedents for the ellipses. What is called for is an antecedent VP that, in the case of (38b) and (37b) for instance, has the form: *visited t*. That is, what is needed is a VP which, when placed inside the ellipsis site, creates a representation like (40) from (38b) (where the

trace in this sentence is bound to the null relative pronoun, represented here with "Op"):

(40)   I visited every town Op_1 I had to [visit t_1].

As we shall see in the following section, a popular method of achieving this is to fashion the required VP out of the ones bracketed in (37b) and (38b) by moving the object which contains the ellipsis out of them. Thus, for example, the antecedent VP for (40) is made from the bracketed phrase in (38b) by moving the object to produce (something like) (41):

(41)   [every town I had to ▲]$_1$ I [visited t_1.]

May (1985: 12–13) suggests that this method of producing the antecedent VP for Antecedent Contained Deletions might itself explain the contrast between (37b) and (38b).[20] Note that one feature of this method of resolving Antecedent Contained Deletions (like that, say, in (38b)) is that the index borne by the trace produced when the object moves out of the antecedent VP (as shown for (38b) in (41)) matches the index borne by the null relative pronoun in the vicinity of the elided VP (the "Op" in (40), for example). This is fortunate because the null relative pronoun needs a trace to bind (in general, relative pronouns must bind a trace), and it can only bind the traces it is coindexed with.

Now, this happenstance of (38b) does not materialize in the ungrammatical (37b). Here, the method of forming an antecedent VP that we have just reviewed will produce something like (42a), which, when plugged into the ellipsis site, yields (42b):

(42)   a.   [every town in every country I had to ▲]$_1$ I [visited t_1].
      b.   *[every town in every country Op_2 I had to [visit t_1]]$_1$ I [visited t_1].

As can be seen, the index borne by the trace created in the antecedent is not the same as that borne by the null relative pronoun into whose scope it falls when placed in the ellipsis site.[21] As a consequence, this null relative pronoun will fail to bind a trace, and this causes the sentence to go bad.

Thus, May's suggestion would capture part of Kennedy's generalization. It does so by, first, adopting the procedure outlined above for forming the antecedent VP in situations of Antecedent Contained Deletions and, second, taking the elided VP to have *exactly* the traces, complete with indices, that their antecedents do. I have illustrated this technique by considering cases where the ellipsis falls inside a direct object, but precisely the same method can be used for all situations where the ellipsis falls within an internal argument of the verb whose VP acts as antecedent. In all of these cases, there will be an Antecedent Contained Deletion, whose resolution will invoke configurations identical to those considered for direct objects.

In fact, May's procedure might be extended to cases where the ellipsis falls within the subject too, thereby capturing the rest of Kennedy's generalization.

If we exploit the Internal Subjects Hypothesis, which gives subjects an underlying position within VP, then (38a) might get a representation like (43):[22]

(43)   [Every man who$_1$ said he$_1$ would [t_1 buy some salmon]]$_1$ did ▲.

Now if the VP in (43) is placed in the ellipsis site, we achieve the grammatical (44):

(44)   [Every man who$_1$ said he$_1$ would [t_1 buy some salmon]]$_1$ did [t_1 buy some salmon].

By contrast, the Internal Subjects Hypothesis would give to (37a) the representation in (45a), which leads to the ungrammatical representation in (45b) when the antecedent VP is put in the ellipsis site:

(45)   a.   [Every man who$_1$ said George$_2$ would [t_2 buy some salmon]]$_1$ did ▲.
       b.   [Every man who$_1$ said George$_2$ would [t_2 buy some salmon]]$_1$ did [t_2 buy some salmon].

What goes wrong in (45b) is very much like what goes wrong in (42b): the index borne by the trace in the VP does not match the index borne by the subject which should bind that trace. Wasow's examples fail for exactly the same reason, as (46) shows. (I distinguish antecedent from elided VPs here with strikeouts.)

(46)   a.   *[A proof that God$_2$ [t_2 exist]s]$_1$ does [t_2 ~~exist~~].
       b.   *[A proof that God$_2$ does [$t_{\ddagger}$ ~~exist~~]]$_1$ [t_1 exist]s.

   If correct, this account of Kennedy's generalization would reduce it to the identity conditions that hold of an elided VP and its antecedent. What originally appears to be a condition on where the antecedents to elided VPs can be found would be explained away as an effect imposed by the requirement that antecedent and elided VPs are identical up to the indices they contain.
   Unfortunately, this account is either incomplete or wrong. It is wrong if it holds that the identity conditions on antecedent and elided VPs require that the indices in the antecedent are *always* preserved in the ellipsis site. This would wrongly give to examples such as (47a) the ungrammatical representation in (47b):

(47)   a.   Lulumae should buy salmon and Mag should ▲ too.
       b.   Lulumae$_1$ should [t_1 buy salmon] and Mag$_2$ should [t_1 buy salmon] too.

As we shall see in the next section, a requirement that preserves the indices in antecedent and elided VPs is routinely lifted. So, if May's technique is to be

successful, it needs to be wedded to an account which explains why, in environments that Kennedy's generalization picks out, the indices in elided VPs must match those in the antecedent.

Kennedy proposes to use a part of Fiengo and May (1994)'s conditions on VP ellipsis to provide this additional account. Fiengo and May argue that an elided VP is subject to a condition relative to its antecedent VP that goes beyond matching the elided and antecedent VPs. They suggest that the clauses which contain an elided VP must be "parallel" to clauses containing the antecedent VP. Moreover, they argue that this additional parallelism constraint controls when a variable bound in the antecedent VP may pick up a new binder in the ellipsis site. For example, in (48) his_1 in the antecedent VP may be understood as his_2 in the elided VP:

(48)   a.   Joe$_1$ likes his$_1$ bar, and Sally$_2$ does ▲ too.
              ▲ = *his$_2$ bar*
         b.   Joe's$_1$ idiosyncrasies bother his$_1$ patrons, and Sally's$_2$ idiosyncrasies
              do ▲ too.
              ▲ = *his$_2$ patrons*

John Ross labeled this fickle relationship pronouns have with their antecedents "sloppiness." Fiengo and May suggest that the kind of interpretation a pronoun must have to invoke a sloppy reading in the ellipsis site triggers the parallelism constraint. Thus, *his* in (48) can accept *Sally* as its binder in the ellipsis site because *Sally* is in a position parallel to that of the binder of *his* (i.e., *Joe*) in the antecedent VP. When this kind of parallelism breaks down, as it does in (49), for example, the sloppy reading for the pronoun is lost:

(49)   a.   Joe$_1$ likes his$_1$ bar, and Sally's$_2$ patrons do ▲ too.
              ▲ ≠ *his$_2$ bar*
         b.   Joe's$_1$ idiosyncrasies bother his$_1$ patrons, and Sally$_2$ does ▲ too.
              ▲ ≠ *his$_2$ patrons*

It is just this kind of sloppy anaphora that is needed to license the different indices on the subject traces in (47). What we seek, then, is a way to prevent recourse to sloppy anaphora in the examples which fall within Kennedy's generalization. The cases in Kennedy's generalization all have a form like that sketched in (50), where one of VP^1 or VP^2 is the antecedent VP, and the other is the elided VP:

(50) $[\ldots X_1 \ldots [_{VP}{}^1 \ldots t_1 \ldots] \ldots]_1 \ldots [_{VP}{}^2 \ldots t_1 \ldots].$

Kennedy suggests that the special relationship that a pronoun/trace must have to get a sloppy reading precludes this kind of structure. In particular, he blames the fact that these structures place within an argument binding one of these traces a trace with a similar dependency. That is, he suggests that these

configurations invoke a kind of circular dependency, much as (51) does, which is fatal:

(51)   [Every picture of itself$_1$]$_1$ arrived.

Heim (1997) also proposes exploiting the Fiengo and May parallelism constraint in an explanation of Kennedy's generalization. But she adopts an interpretation of this constraint that Rooth (1992a) introduces. Rooth argues that there are two completely independent conditions on VP ellipsis. One is responsible for matching the elided VP with its antecedent. This constraint is sensitive to the lexical content of the VPs involved, as well as their syntactic form, but does not care about the indices they hold. Let us call this the "syntactic identity condition." The second constraint is Fiengo and May's parallelism constraint, which Rooth suggests is actually better expressed as a requirement that the elided VP be contained within a constituent which contrasts with a constituent containing the antecedent VP. Let us therefore call this the "contrast condition."[23]

The conditions that determine when two constituents contrast will then influence the form that antecedent and elided VPs may have. On Rooth's proposals, it is also this constraint that determines when the indices in elided and antecedent VPs must match. The contrast condition, which is built upon Rooth's theory of focus,[24] can be abbreviated as (52):

(52)   a.   An elided VP must be contained in a constituent which contrasts with a constituent that contains its antecedent VP.
       b. α *contrasts* with β iff
            (i)   Neither α nor β contain the other, and
            (ii) For all assignments g, the semantic value of β with reference to g is an element of the focus value of α with reference to g.
            (iii) The focus value of $[_\xi \ldots \gamma \ldots]$, where γ is focused, is $\{[\![\phi]\!]$: $[_\phi \ldots x \ldots]\}$, where x ranges over things of the same type as γ and the ordinary semantic value of ξ is identical to $[\![\phi]\!]$ except that x replaces γ.

This condition requires that there be a constituent containing an elided VP which also includes a focussed item.[25] The focussed item will cause that constituent to contrast with another; and (52) requires that the constituent it contrasts with hold the antecedent VP. Further, because (52bii) fixes the values of the indices in the constituents being contrasted, it will have the effect of preventing the indices in antecedent and elided VPs from having different values, unless – by way of (52biii) – they are borne by focussed items.

Consider (53), which illustrates:[26]

(53)   a.   Mag$_1$ ate more than she$_{2F}$ had ▲.
       b.   *Mag$_1$ ate more than she$_2$ could$_F$ ▲.
            (compare: *Mag$_1$ ate more than she$_1$ could$_F$ ▲.*)

In (53a), *she* bears focus, and in (53b), *could* does. Only in (53a) can *she* be understood as bearing a different index than *Mag*. This follows from the contrast condition because only when the subject of the elided VP is focussed will (52b) allow it to bear a different index than the subject of the antecedent VP. Imagine, for concreteness, that the elided VP has the form in (54a) and the antecedent VP has the form in (54b):[27]

(54)   a.   . . . [$_{XP}$ she$_2$ [$_{VP}$ t_2 ~~ate~~]].
       b.   . . . [$_{YP}$ Mag$_1$ [$_{VP}$ t_1 ate]].

For the elided VP in (54a) to satisfy (52), XP must contrast with YP. The definition of contrast requires that XP and YP have the same denotation, except for those terms that are focussed. Because the index on *she* and *Mag* are different, the clauses in (54) will fail this requirement unless *she* is focussed. Thus, the difference in (53).

Because Kennedy's examples involve situations in which the ellipsis is contained within an argument whose index binds a trace within the antecedent VP, they will have to avail themselves of focus in the same way as (53a) does. But it turns out that in a significant range of these situations, this will not be achievable precisely because (52bi) prohibits satisfying the contrast condition when the clause containing the ellipsis is within the contrastive clause containing the antecedent VP.[28]

We have, then, two possible strategies for capturing Kennedy's generalization. Kennedy's own strategy seeks to block these examples from a more general condition on circular reference. Heim's strategy seeks to block them from the necessary contrastiveness that VP ellipsis invokes. Rooth (1992b) and Tancredi (1992), who offers a theory of focus in contexts of ellipsis very like Rooth's, both emphasize that the contrast condition is not peculiar to ellipsis. It is found in cases of anaphoric deaccenting as well, for example. Thus, neither of these strategies demands that there be constraints on the relationship between antecedent and elided VPs that are ellipsis specific.

3   How the Ellipsis Gets its Meaning

Our third subproblem is to determine by which principles the ellipsis site gains its meaning. It is useful to link this question up with the issue of what the ellipsis site is. If the kind of thing that an ellipsis is can be determined, then we might be aided in figuring out what sort of meaning the ellipsis has (and the methods by which it gets that meaning) by examining other things of the same kind.

This approach to the problem hooks up easily with the first subproblem: the question of what conditions an ellipsis is licensed by. It would be natural, for example, to think of the ellipsis site as holding a null pro-form if the licensing condition turns out to be like that for null arguments. And it is natural to think

of the ellipsis site as holding a trace, in the event that its licensing condition more nearly matches that of traces. Under the first scenario, we might also try to see the anaphoric properties that ellipsis invokes as making use of the same mechanisms that pronouns in general do. That is, we might speculate that the reason the syntactic conditions on ellipsis are the same (if they are) as those on null arguments is that there is a kind of null pro-form in such cases. But if the licensing conditions on ellipsis seem to be grounded in the principles that govern where traces can be, then it might be advantageous for traces to be thought of as ellipsis sites, along the lines discussed above. The view of what an ellipsis is that best meets this scenario is what I will call the derivational approach. On this conception, an ellipsis site is derivationally related to a full syntactic version of the phrase whose meaning is recovered. So, for example, the surface representation of (2) could be seen as related to the fuller . . . *Fred will eat rutabagas either* through either a deletion process (that removes the VP by way of its anaphoric connection to a previously occurring VP) or a reconstruction process (that forms from the surface representation an LF into which the understood VP is copied).

A glitch to this equation arises if the method I sketched for deriving the licensing conditions on VP ellipsis in section 1 are correct. On this account the elided VP is not actually in the position we might have expected it to be, but instead has moved. This account will manufacture a trace in the position we expect to find the elided VP, thereby invoking the licensing conditions on traces. If this is correct, then the content of the ellipsis and the conditions on its trace no longer connect. It could as easily be a pro-form that topicalizes as it could a full-bodied (elided) VP. Let us therefore keep this caveat in mind.

The pro-form position has as its fullest champion Dan Hardt (see Hardt 1992, 1993); but a similar hypothesis can be found in Schachter (1977a), Partee and Bach (1984), Chao (1987), and Lobeck (1995). Sag (1976), Williams (1977), and Wasow (1972) sponsor the derivational approach.[29]

The difference between these positions engaged much of the early literature on anaphora and ellipsis. (Hankamer and Sag 1976 have an enlightening review.) Grinder and Postal (1971), for example, argue that VP ellipsis is a form of "Identity of Sense" anaphora, a dependency which obtains when the anaphor recovers the semantic content of its antecedent, rather than its antecedent's referent. Thus an antecedent and an Identity of Sense anaphor do not independently express ways of referring to the same entity, but instead constitute expressions with the same denotation. One of their interesting arguments comes from what they dub the "Missing Antecedent" phenomenon, illustrated by (55):

(55)   My uncle doesn't have a spouse but your aunt does ▲ and *he* is lying on the floor. (Grinder and Postal 1971: (17a), 278)

In (55), the VP ellipsis in the *but* clause introduces the indefinite antecedent to *he* (= *a spouse*). That is, the ellipsis site in (55) recycles the semantic material of its antecedent and thereby introduces a referent that the antecedent did not.

This property of ellipsis has a straightforward expression under the derivational approach. Suppose that there is a level of representation where an ellipsis site is made up of a syntactic representation, and it is this representation that is matched against the antecedent. Thus, the ellipsis recycles the linguistic content of its antecedent – in the case of (55) this is *have a spouse*, the very words that make up its antecedent – thereby reinvoking its denotation. The pro-form approach, on the other hand, will have to overcome the fact that the Missing Antecedent phenomenon is not present in the transparent pronominal anaphora of (56), as Bresnan (1971) observes:[30]

(56) *My uncle didn't buy anything for Christmas, but my aunt did it for him, and *it* was bright red.
      (compare: *My uncle didn't buy anything for Christmas, but my aunt did, and it was bright red.*) (Bresnan 1971a: (9), 591)

Hence, the Missing Antecedent phenomenon makes the pro-form approach look doubtful, but fits well the derivational interpretation of ellipsis.

There is a slightly different case which, like the Missing Antecedent phenomenon, suggests that an ellipsis site is made up of linguistic material recovered in the antecedent. This case is found in contexts of extraction, where the ellipsis contains a variable bound to the extracted item, as for example in (57), drawn from Fiengo and May (1994):

(57) a. I know which book Max read, and which book Oscar didn't ▲.
      b. This is the book of which Bill approves, and this is the one of which he doesn't ▲. (Fiengo and May 1994: (99a, c), 229)

In these cases too the ellipsis site seems to have internal parts: in (57a), a variable bound by *which book*, and in (57b), a variable bound to *which*. And, as with the Missing Antecedent phenomenon, obvious pronouns do not seem to tolerate the same kinds of internal part; compare (57) with (58):

(58) a. *I know which book José didn't read for class, and which book Lulumae did it for him.
         (compare: *I know that José didn't read this book for class, but that Lulumae did it for him.*)
      b. *This is the book which O. J. Berman reviewed, and this is the one which Fred won't do it.
         (compare: *O. J. Berman reviewed this book but Fred won't do it.*)

Just as in (55), then, the ellipses in (57) recover their syntactic form (= [$_{VP}$ *read t*] and [$_{VP}$ *reviewed t*]) from their antecedents. By contrast, pronouns have no syntactic form beyond the lexical item they constitute, and (58) therefore results in a violation of the ban against vacuous quantification. Thus, as in the Missing Antecedent cases, we are led to the conclusion that an ellipsis site should not be seen as consisting of a hidden pronoun.[31]

That the elided material in cases such as (57) does contain syntactic material, and more particularly a trace bound to the A'-moved item, is strengthened by Haïk's (1987) discovery that various island effects hold into the ellipsis site:

(59) a. I know which book Mag read, and which book Mr Yunioshi said that you hadn't ▲.
      b. ?*I know which book Mag read, and which book Mr Yunioshi asked why you hadn't ▲.
      c. ?*I know which book Mag read, and which book Mr Yunioshi read my report that you hadn't ▲.
      d. ?*I know which book Mag read, and which book Mr Yunioshi discussed after I had ▲.

The difference between (59a) and the others is the familiar bounding constraints, whatever they may be, which govern how far a *wh*-phrase may move: descriptively speaking, (59b) is an instance of Chomsky's *Wh*-Island Constraint, (59c) exemplifies Ross's Complex NP Constraint, and (59d) is a result of the Adjunct Condition. Insofar as these conditions are ones that hold of an A'-moved term and its trace, we have reason to believe that there is a trace in the ellipses of these examples.[32]

The cases of Antecedent Contained Deletion discussed in the previous section[33] probably illustrate a similar point. In such cases, the antecedent VP appears to contain the ellipsis, as in (60):

(60)   Dulles [suspected everyone who Angleton did ▲].

This is a situation that VP ellipsis permits, but that overt forms of VP anaphora do not:

(61) a. *Dulles suspected everyone who Angleton did it.
      b. *Dulles suspected everyone who Angleton did so.

Of course, this suggests again that VP ellipsis should not be seen as the silent version of a pro-form.

The ungrammaticality of the pro-form anaphora in (61) is no doubt related to the similar difficulties in (62):

(62) a. *Dulles bought [a portrait of it_1]$_1$.
      b. *Dulles praised [the picture of a portrait of it_1]$_1$.

There is something that prevents the pronouns in (62) from being referentially dependent on the argument containing them; and presumably this same force is at play in (61). It is not immediately clear, however, how (60) can arise even if it is not an instance of pro-form anaphora. On the derivational approach to VP ellipsis, for instance, there is no antecedent with the proper form for the ellipsis in (60), as can be seen in (63):

(63)   Dulles [suspected everyone who Angleton did [~~suspected everyone who Angleton did . . .~~]].

Even if we could figure out how to fill in ". . . ," the elided VP in (63) is not the one that is understood to be elided in (60).

   As foreshadowed in the previous section, a popular approach to this problem on derivational theories of VP ellipsis is to view Antecedent Contained Deletions as being licensed by movement of the argument which contains the ellipsis.[34] May (1985), for instance, argues that the argument containing the elision scopes out of the antecedent VP. He argues that there is a level of syntactic representation projected from the surface in which arguments occupy the position at which their scopes are computed. In this level of Logical Form (LF), the object in (60) can be scoped out of the VP which is to serve as antecedent, yielding (64):

(64)   [everyone who Angleton did ▲]$_1$ [Dulles [suspected t_1]].

And in (64), the VP is now of nearly the right form to serve as antecedent, as (65) illustrates:

(65)   [everyone who Angleton did [~~suspected t_1~~]]$_1$ [Dulles [suspected t_1]].

The only difficulty with (65) is that the form of the verb is not appropriate for the ellipsis site. Let us set this aside for the moment.

   Hornstein (1994, 1995) offers a variant of this account which credits movement of the object out of the antecedent VP not to QR, but to "Object Shift," the name given to a kind of short Scrambling – an instance of argument movement – found in the Scandinavian languages.[35] On Hornstein's interpretation, Object Shift brings direct and indirect objects into the specifiers of functional projections (which license them, perhaps through Case marking) at LF. These functional projections are thought to lie between the surface position of the subject and the VP. Hence, the LF Hornstein would give to (60) might be as in (66):

(66)   [Dulles [$_{FP}$ [everyone who Angleton did [~~suspected t_1~~]]$_1$ [F° [$_{VP}$ suspected t_1]]]]. (understand "F°'' to be the functional head that licenses objects)

How these two variants should be compared will depend on whether "Object Shift" is identified with QR or not.

   An interesting consequence of these approaches is that they manufacture in the elided VP a trace, which in turn forces the environment in which the elision arises to have a binder for that trace. In (60), the relative pronoun binds the trace. In fact, a general feature of Antecedent Contained Deletions is that they involve relative clauses. An Antecedent Contained Deletion cannot survive in other kinds of complex NP:

(67) *I [told a rumor that Mag did [~~told a rumor that Mag told a rumor that . . .~~]].

The *that*-clause in (67) cannot be a complement to *rumor*. That is, the content of the rumor I told cannot be *that Mag told a rumor*; instead, the *that*-clause says that Mag and I told the same rumor. So, this fact about Antecedent Contained Deletion, like that in (57), suggests that an elided VP can have enough of the form of a VP to hold a trace.[36] It is this feature of Antecedent Contained Deletions, recall, which May's approach to Kennedy's Generalization exploits.

An unfortunate feature of this last argument for the derivational approach to VP ellipsis is that it rests on locating a phonetically empty term – the trace – within an ellipsis. But as we have all no doubt had occasion to discover, finding the location of invisible things is not trivial. Could we have mislocated it? Might the traces in (60) and (57) in fact be outside the ellipsis, as indicated in (68)?

(68) a.   I know which book Max read, and which book$_1$ Oscar didn't ▲ t_1.
    b.   Dulles [suspected everyone who$_1$ Angleton did ▲ t_1].

This would be possible if VP ellipsis, or some other ellipsis phenomenon, could elide portions of VPs, leaving remnants in the positions that the traces in (68) occupy. Interestingly, that does seem possible:

(69) a.   While O. J. Berman read Fred, he didn't ▲ Dickens.
    b.   Sally suspected Joe, but he didn't ▲ Holly.

Levin (1986) dubs these "pseudogaps," and argues that they involve a process different from VP ellipsis. Her reason for distinguishing the two turns on the observation that there are certain environments where VP ellipsis is permitted, but pseudogapping is not. In fronted adverbials, for instance, VP ellipsis but not pseudogapping is licensed (an observation that goes back to Sag's dissertation):

(70) a.   Although Holly doesn't ▲, Doc eats rutabagas.
    b.   *Although Mag doesn't ▲ eggplants, Sally eats rutabagas.

It is possible, then, that we have mistaken VP ellipsis for pseudogapping in (57) and (60). This is what Jacobson (1992) and Hardt (1993: sec. 2.5), who credits Lappin and McCord (1990), propose. Hardt leans on the fact that cases like (57) and (60) are prohibited in fronted adverbials, and so appear more like pseudogapping than VP ellipsis:

(71) a.   ?*Although I don't know which book Sam did ▲, I do know which book Sally read.
    b.   ?*Near everyone Angleton did ▲, Dulles stood.
       (compare: *Dulles stood near everyone Angleton did*.)

While it may well be possible to give some of the cases we have examined a pseudogapping source, Haïk (1987), Kennedy (1997), and Tomioka (1997) give compelling reasons for not reducing all such cases to pseudogapping. Pseudogapping is subject to restrictions on the remnants which are not always reflected in those cases of ellipsis involving traces. Pseudogapping, for instance, cannot elide part of a prepositional phrase, as Haïk (1987) and Kennedy (1997) observe, nor may it remove part of a noun phrase, as Tomioka (1997) points out. Illustrative examples are in (72):

(72) a.   *Sally will stand near Mag, but he won't ▲ Holly.
       b.   *While Holly didn't discuss a report about every boy, she did ▲ every girl.

But traces may be related to these positions, as (73) demonstrates:[37]

(73) a.   ?I know which woman FRED will stand near, but I don't know which woman YOU will ▲.
       b.   Sally will stand near every woman that you will ▲.
       c.   I know which woman HOLLY will discuss a report about, but I don't know which woman YOU will ▲.
       d.   Holly discussed a report about every boy that Berman had ▲.

(The badness of (73a) reflects the difficulty in moving *wh*-phrases out of adjuncts, and contrasts with (72a).) These examples at least, then, must not be pseudogaps; and unless some other alternative can be found, it is reasonable to conclude that VP ellipsis has the ability to host a trace.

Moreover, despite the mismatches in licensing environments that Levin catalogues, there is, I think, considerable reason to believe that pseudogapping is a special instance of VP ellipsis. The reason is that the terms which can serve as remnants in pseudogaps are limited in a way that suggests they have moved from the elided VP. That pseudogapping is VP ellipsis from which a remnant has moved is a thesis that Kuno (1981), Jayaseelan (1990), and Lasnik (1995f) have advanced in recent years. Kuno and Jayaseelan argue that pseudogapping is the product of eliding a VP after Heavy NP Shift has occurred. This would explain, for instance, why pseudogapping cannot strand a preposition, since Heavy NP Shift cannot do so either:

(74)   *Sam stood near yesterday every one of the women we'd been discussing.

Lasnik, by contrast, argues that Object Shift is responsible for bringing the remnant out of the elided VP. Object Shift, at least as it is found in the Scandinavian languages, shares with Heavy NP Shift an inability to strand prepositions, as noted above. But Object Shift differs from Heavy NP Shift in being able to move pronouns and the first object of a double object construction, things Heavy NP Shift cannot do, as (75) indicates:

(75) a. *Truman visited yesterday you.
     b. *Truman told the story Rusty.

Because pronouns and the first object of a double object construction can
be the remnants in pseudogapping (as in (76)), Lasnik concludes that Object
Shift makes a better candidate than does Heavy NP Shift for the mechanism
evacuating remnants from a pseudogapped VP:

(76) a. While Truman didn't visit me, he did ▲ you.
     b. While Truman didn't tell me a story, he did ▲ Rusty.

  Actually, however, even Object Shift does not have quite the right properties
to be the source of the constraints on pseudogapping remnants. Object Shift is
unable to move prepositional phrases, for instance; whereas prepositional
phrases, though somewhat strained, may be the remnants of pseudogapping:[38]

(77) a. While José won't talk about Mag, he might ▲ about Holly.
     b. Although Doc might tell it to you, he won't ▲ to me.

Moreover, Levin notes that pseudogapping seems able to strand remnants
which are buried quite deeply in the elided VP. A couple of her examples are
in (78):

(78) a. I'm sure I would like him to eat fruit more than I would ▲ cookies.
     b. I think you need to show yourself more than you do ▲ anyone else.
         (Levin 1986: (7) and (13), 15–16)

While Levin suggests that cases like these are possible only in comparatives,
raising the spectre that they may result from whatever it is that creates (the
often peculiar) elisions in these constructions, I think they are not impossible
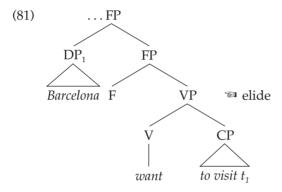in other contexts. Consider, for example, (79):

(79) a. ?While I wouldn't like him to eat cookies, I would ▲ fruit.
     b. ?While I think you need to examine yourself, you don't ▲ anyone else.
     c. While Truman doesn't want to visit every city, he does ▲ Barcelona.

In (78) and (79), the remnants are the objects of a clause embedded within the
elided VP. If Object Shift is the process that brings remnants out of the elision,
it would have had to move them clear out of the clause they start in. But
Object Shift, at least as it is represented in the Scandinavian languages, cannot
move an object that far. For these reasons, then, Object Shift is not quite the
right mechanism to blame for bringing remnants out of a pseudogapped VP.
  Still, reducing pseudogapping to VP ellipsis is, I believe, sound. It requires,
however, an analogy to the kind of Scrambling that Dutch hosts in its middle
field, rather than to Heavy NP or Object Shift. In Dutch, it is possible to Scramble

objects, whether they be pronouns or larger, and prepositional phrase complements leftward past adverbs and the like. This Scrambling, like Heavy NP Shift and Object Shift, is also unable to strand prepositions.[39] Thus, Scrambling has the constraints on pseudogapped remnants that Jayaseelan and Lasnik singled out as indicative of movement. Further, Scrambling is able to span long distances, bringing objects out of an embedded clause and beyond the VP which that clause is embedded in, as in (80):

(80)   . . . dat Jan *Marie* heeft geprobeerd [*t* te kussen].
       . . . that Jan Mary has   tried   to kiss
       (. . . that John has tried to kiss Mary)

It therefore has the power to generate the large pseudogaps in (78) and (79); simply let VP ellipsis be fed by long distance Scrambling, as shown in (81):

(81)

Scrambling, then, shows the features we have encountered so far in pseudogapping: it can relocate PPs and DPs, though not if it entails stranding a preposition, and it can do so over long distances.

Moreover, long distance Scrambling in Dutch and the span that large pseudogaps may have are subject to hauntingly similar constraints. Long distance Scrambling is restricted to certain kinds of non-finite complement clause; it is blocked from adjunct clauses, as in (82a), and from finite complement clauses, as in (82b):

(82)   a.   *. . . dat Jan   het boek *zijn vader* gelezen heeft [om *t* te pliezeren]
                . . . that John the book his father read   has   C°   to please
              (. . . that John has read the book to please his father)
       b.   *. . . dat Jan *de Krant*   beweert [dat Sam *t* leest]
                . . . that John the paper claimed that Sam   read
              (. . . that John claimed that Sam read the paper)

And similarly the remnants of a pseudogap cannot be embedded within an adjunct clause, as in (83a), nor may they be found within a finite complement clause, as in (83b):[40]

(83) a. *While Rusty might leave in order to please Mag, he won't ▲ his father.
  b. *While Doc might claim that O. J. Berman had read his book, he wouldn't ▲ the paper.

And finally, the class of terms that Scrambling may affect probably matches the range of terms that may remain after pseudogapping.[41] Verbal particles, for instance, typically make bad remnants for pseudogaps, as in (84); and they also resist Scrambling, as in (85):

(84) a. *While Perry might switch the TV OFF, he won't [e] ON.
  b. *I'll turn the radio DOWN, but I won't [e] UP.

(85) *. . . dat Jan de TV uit steeds   zet.
    . . . that Jan the TV out all the time puts
    . . . dat Jan de TV steeds   uit zet.
    . . . that Jan the TV all the time out puts (Zwart 1993: 321)

There are other relevant cases to look at, but in outline it looks as though the pattern of remnants left by pseudogaps matches those that are able to Scramble out of VPs in Dutch. If pseudogapping is VP ellipsis, this finds an explanation: remnants are just those phrases able to move out of the elided VP.

Of course, this leaves the large problem of understanding how English avails itself of Scrambling in these contexts when it is otherwise unable to.[42] And there are other problems for reducing the phenomena of pseudogapping entirely to VP ellipsis. We have already seen (in (70)) that pseudogaps degrade considerably in fronted adverbials, relative to VP ellipsis. But perhaps this difference is related to the fact that in pseudogaps, but not elided VPs, there is an object that must be in a contrastive relationship with a parallel term in the antecedent clause. It is not unreasonable to expect the contrast condition we discussed in the previous section, for example, to be affected by this extra element. Note how much more awkward it is to contrast *rutabagas* in (86b) than it is in (86a):

(86) a. Fred likes eggplants, although he likes RUTABAGAS too.
  b. Although he likes RUTABAGAS too, Fred likes eggplants.

Perhaps, then, there is some fact about focus that makes the contrast condition more difficult to achieve for pseudogaps in fronted adverbials than it does for elided VPs.

Another puzzling way in which pseudogaps and VP ellipsis differ concerns the availability of "sloppy" readings for pronouns. Chris Kennedy points out (and credits the observation to Sag 1976) that the reading indicated for the elided VP in (87a) does not arise for the pseudogap in (87b):[43]

(87) a. Fred$_1$ gave flowers to his$_1$ sweetie because Frank$_2$ had ▲.
          ▲ = *given flowers to his$_2$ sweetie*
      b. Fred$_1$ gave flowers to his$_1$ sweetie because Frank$_2$ had ▲ chocolates.
          ▲ ≠ *given to his$_2$ sweetie*

Pseudogaps do not seem to permit a sloppy reading for their pronouns: The only reading (87b) has is one in which Frank gave chocolates to Fred's sweetie. Perhaps here too, we can seek an account in the fact that pseudogaps invoke the contrast condition in a different way than elided VPs do. The contrast condition in both Rooth (1992a) and Fiengo and May (1994) plays a central role in determining when sloppy readings are available for pronouns, and so this seems a natural place to look for an explanation. At present, however, I cannot see how to give this speculation content.

Finally, it should be noted that, in general, pseudogapping is a much more marginal construction than VP ellipsis. Levin (1986) very carefully explores factors that appear to weaken the acceptability of pseudogaps but have no discernible effect on VP ellipsis. And, perhaps related, pseudogaps resist finding antecedents in other sentences, whereas VP ellipsis has no trouble doing this.[44] The discourse in (88) is decidedly worse than the discourse in (1)–(2):

(88) a. Holly won't eat rutabagas.
      b. ??I don't think Fred will ▲ bananas either.

If a complete reduction of pseudogaps to VP ellipsis is to be successful, the extreme fragility of pseudogapping should be explained.

But if these differences in pseudogapping and VP ellipsis do turn out to be superficial, we have two reasons for doubting that pseudogapping can rescue us from the conclusion that examples like (57) and cases of Antecedent Contained Deletion reveal traces in elided VPs. First, there are some examples of these kinds for which a pseudogapping source is very dubious (namely: (73)). And second, it is not clear that pseudogaps are anything more than elided VPs with traces in them to begin with; the evidence reviewed above raises the suspicion that the remnants in pseudogaps have Scrambled from an elided VP. We might also remember that Kennedy's Generalization (in (39)) is amenable to the kind of account that May, Kennedy, and Heim explore only if instances of Antecedent Contained Deletions invoke traces in the ellipsis site. That is, this Generalization finds an account only if no instances of Antecedent Contained Deletions come by way of a process like that which Levin, Hardt, and others allege pseudogapping to be.

So far as I know, employing an account of pseudogapping which makes it independent of VP ellipsis is the only hope for avoiding the conclusion that elided VPs can contain a trace. To the extent that it fails, then, confidence in the derivational account of VP ellipsis strengthens.

Up to now, all the evidence we have reviewed appears to favor the derivational view of VP ellipsis. There are also facts, however, which have been taken

to weigh against this view. Interestingly, though, the derivational approach must be wedded to an additional assumption for these facts to be seen as problematic. The additional assumption is that the "syntactic identity" condition introduced in the previous section requires the form of the elided VP to match perfectly the form of its antecedent VP. This is because these problematic facts are all cases where the antecedent VP could not be copied without change into the ellipsis site. These will then be problems for any theory that holds both (89i) and (89ii):

(89)   i.   An ellipsis site consists of a silent version of the phrase understood to be there.
       ii. The silent phrase in an ellipsis site is lexically and syntactically identical to its antecedent.

Recall that by "lexically and syntactically" we mean that the two VPs can differ with respect to the indices they host, but in no other way. (89i) and (89ii) are not so badly wedded, as most derivational approaches do embrace some sort of syntactic identity condition on antecedent and elided VPs. As might be expected, however, a rabid derivationalist will point to (89ii) as the source of trouble before pointing to (89i).

   Let us look at some of these cases, and examine how far into (89) they cut. Some involve the presence of variables within an ellipsis site. Hardt (1993: sec. 2.4), for instance, points out that cases such as (90) should be expected to be ungrammatical under a derivational view:

(90)   a.   China is a country *that* Joe wants to visit *t*, and he will ▲ too, if he gets enough money. (from Webber 1978)
       b.   This is just the kind of thing *that* Harris could have suggested *t*. And in fact, he did ▲.
       c.   Harry is someone they would like to send *t* to the Olympics. And they will ▲ too, if they can finance it. (Hardt 1993: (21)–(22), 15–16)

If the antecedent VPs recycle their trace into the ellipsis site, the results should be on a par with (91):

(91)   a.   . . . he will [visit *t*] too, if he gets the money.
       b.   And in fact, he (did) [suggested *t*].
       c.   And they will [send *t* to the Olympics].

The examples in (91) are ungrammatical, of course, at least in part because they carry an unbound trace. (The form of the main verb in (91b) is also a source of ungrammaticality; we return to this.) But the examples in (90) are just fine. So if VP ellipsis is simply a way of disguising an otherwise normal VP, and antecedent VPs show us what the elided VPs look like, why is there a contrast between (90) and (91)?

A variety of answers appears possible. One, of course, would be to abandon the derivational approach altogether and adopt the analogy to pronominal anaphora which Hardt advises. But then the differences between pronominal anaphora and ellipsis reviewed above will have to be explained. This might be done, perhaps, by imagining that we simply chose the wrong pronouns to compare ellipsis to in the discussion above. Perhaps, for example, we should have analogized to the VP anaphor *do so*, which not only appears to be licensed in contexts like (90) – witness (92a) – but also invokes the Missing Antecedent effect, as can be seen from (92b):

(92) a. China is a country that Joe wants to visit, and he will do so too, if he gets enough money.
      b. Jerry wouldn't read a book by Babel, but Meryl has done so and *it* was pretty good.

Moreover, as Hardt points out, the ability of *do so* to license the Missing Antecedent effect suggests that our earlier account of this effect by way of a derivational interpretation of ellipsis is in danger.[45] So perhaps the case for the derivational account is unraveling.

Unfortunately, however, *do so* anaphora does not seem able to host a variable in the same way as VP ellipsis can; (93) contrasts with (57):

(93) a. *I know which book Max read, and which book Oscar hasn't done so.
      b. *This is the book of which Bill approves, and this is the one of which he can't do so.

So however it is that *do so* has the abilities that it does, it still fails to have the ones needed to subsume VP ellipsis. Unless some other pro-form can be found whose properties match those of ellipsis, this answer to the problem does not seem promising.

Another possibility would be to maintain that VP ellipsis hides a normal VP, and imagine that in (90) the moved phrase in the antecedent clause binds, somehow, the variable both in the antecedent VP and in the elided VP. That is, we might try to see in (90) the syntax of an across-the-board movement, maybe along the lines sketched in (94):

(94) a. . . . a country [*that* [[Joe wants to visit *t*], and [he will ~~visit *t*~~ too]], if he gets enough money.
      b. . . . the kind of thing [*that* [[Harris could have suggested *t*]. And [in fact, he did ~~suggest *t*~~]].
      c. . . . someone *Op* they would like to send *t* to the Olympics. And they will [~~send *t* to the Olympics~~ too].

(The parses in (94b) and (94c) would require that the second apparently independent sentence be subordinated into the first.) This strategy would give to

the rogue trace in the ellipsis site the very same binder as binds the trace in the antecedent VP. But while such an analysis may be possible for (90), it cannot be imported to the similar examples in (95):

(95) a. Joe might wish he had ~~visited a country~~, but this isn't a country he has visited *t*.
      b. While I might want to ~~suggest this kind of thing~~, this is the kind of thing that Harris has already suggested *t*.

So this solution is not general enough.

   A final possibility is the one foreshadowed above: abandon (89ii), the requirement that antecedent VPs are a reliable guide to the form that elided ones have. We have already seen in the previous section that the indices borne by parallel arguments in antecedent and elided VPs need not be identical. But that an additional weakening of (89ii) is needed is shown by examples as simple as (96):

(96) We like our friends and they do ▲ too.

Here, if the elided VP were required to be absolutely identical to its antecedent, we would expect (96) to have only the meaning found in (97):

(97) We like our friends and they like our friends too.

But (96) may also have the "sloppy" reading for the genitive pronoun, paraphrased by (98):

(98) We like our friends and they$_1$ like their$_1$ friends, too.

That is, the genitive understood in the ellipsis can be third person, not the first person pronoun it is in the antecedent VP. Fiengo and May (1994) call the process which allows lexical mismatches of this sort "vehicle change." On their view, the phrases which serve as arguments are merely "vehicles" for the referential indices that come appended to them. These indices, they suggest, are what actually do the work of referring. The phrases they are attached to are not without their own semantic contribution, of course, but can be thought of nonetheless as extricable from the business of referring. As long as their own semantic contribution is minimal enough, they might be seen as interchangeable. Imagine, then, that one VP can act as antecedent for another's ellipsis if they are identical up to the vehicles which their arguments' indices come appended to. If so, perhaps the indices borne by the traces in (90) and (95) can trade those traces in for another vehicle, and thereby avoid violating the condition which guarantees that traces have binders. Fiengo and May suggest, concretely, that it is a resumptive pronoun which trades in for the trace in these examples.[46]

There is a variety of ways in which antecedent and elided VPs may differ, many of which might be amenable to a vehicle change treatment. For example, that (99a) fails to invoke the Binding Theoretic violation illustrated in (99b) when it gets the reading that (99c) paraphrases could be explained if reflexives can trade for pronouns under vehicle change:[47]

(99)   a.   Rusty$_1$ talked about himself$_1$ only after Holly$_2$ did ▲.
       b.   *Rusty$_1$ talked about himself$_1$ only after Holly$_2$ did [talk about himself$_1$].
       c.   Rusty$_1$ talked about himself$_1$ only after Holly$_2$ did [talk about him$_1$].

Fiengo and May offer this suggestion, and also explore the possibility that reflexive pronouns can come apart, allowing only the pronoun part to reconstruct into the ellipsis. Hestvik (1992b) offers still another account of these phenomena, which, however, has counter-examples in Hardt (1993: 20).

In these two cases, and others like them, vehicle change exchanges one DP for another of the same type. So in (90), for example, one variable (a trace) is traded for another (a resumptive pronoun). And in (99a), one pronoun (a reflexive) is traded for another (a non-reflexive). Fiengo and May suggest that vehicle change be constrained to changing the values of the Binding Theoretic features [pronoun] and [anaphor], which Chomsky (1981) suggests carve up the space of DP types. This would allow the exchanges we have reviewed, and applies to a variety of other like cases.[48]

There are, however, several situations where an elided VP differs from its antecedent, which cannot be accounted for by so constrained a vehicle change. In one of these, discussed by Sag (1976), a negative polarity item stands in an antecedent VP, but would not be permitted in the elided VP. An example from Hardt (1993) is (100):

(100)   We haven't decided to blacklist any firms. But there's a chance we might ▲. (Hardt 1993: (68), 22)

If the antecedent VP in this example is faithfully copied into the ellipsis site, we would expect something as ungrammatical as (101):

(101)   *But there's a chance we might [blacklist any firms].

What is required is for something on the order of (102) to be created:

(102)   But there's a chance we might blacklist some firms.

A similar effect is found in (103):

(103)   I could find no solution, but Holly might ▲.

In this case the elided VP is understood as (104):

(104)   . . . but Holly might find a solution.

If vehicle change were to be extended to these sorts of case, it would have to be allowed to make changes to the quantifiers involved, but prevented from making arbitrary switches. We would not want to allow (105), for example, to be synonymous with (106):

(105)   Fred talked about everything before Rusty did ▲.

(106)   Fred talked about everything before Rusty did [talk about something].

It is probably no accident that in the cases where the quantificational force has changed (i.e., (100) and (103)), the fancier indefinites "*any* NP" and "*no* NP" are transformed into the plainer "*a* NP" or "*some* NP." It is perhaps not unimaginable that "*some* NP" or "*a* NP" might be seen as a component of "*any* NP" and "*no* NP." If so, it could be that the changes in quantifiers witnessed above involve a process that strips indefinites of their fancy part, leaving the vanilla "*a* NP" or "*some* NP" as residue. This direction to the problem is strengthened by the observation that (103) gets the reading indicated in (104) only when the antecedent clause has a meaning paraphrased by *I couldn't find a solution*, in which, note, negation has indeed been separated from the vanilla indefinite.

If it is unclear whether vehicle change can be extended to (100) and (103), it is clear that it cannot be so extended to a variety of other mismatches which ellipsis tolerates. Some of these mismatches are dramatic enough, in fact, to weaken (89ii) beyond its usefulness to the derivational approach. But others are amenable to, even supportive of, a derivational treatment.[49]

One of the unthreatening ones is the difference in inflectional class that various of our previous examples have illustrated. As in (107), these examples let a verb of one inflectional type act as antecedent for a verb bearing a different inflectional ending:
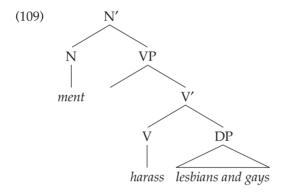
(107)   Joe will [go to the store], even though Fred already has [~~gone to the store~~].

These are understandable from a derivational standpoint, if we see verbs and their inflections as coming together during the course of the syntactic derivation. Granting this assumption, VP ellipsis can be seen acting at the stage in the derivation when antecedent and elided verb are in their stem form, and before their inflection causes them to differ. In (107), for example, ellipsis could act on *gone to the store* before *go* gets inflected.[50]

A similar strategy could arguably be employed in (those rare) cases where the antecedent does not match the elided VP in category. It is, for example, possible for an elided VP to take an NP as its antecedent, as in (108), from Hardt:

(108) a. David Begelman is a great [laugher], and when he does ▲, his eyes crinkle at you the way Lady Brett's did in *The Sun Also Rises*. (from *You'll Never Eat Lunch in This Town Again*)

b. Today there is little or no *OFFICIAL* [harassment of lesbians and gays] by the national government, although autonomous governments might ▲.

c. The candidate was dogged by charges of infidelity and [avoiding the draft], or at least trying to ▲. (Hardt 1993: (111), (117), and (120), 34–5)

In these cases, note, the NP which acts as antecedent (bracketed in each case) is deverbal. If, as seems increasingly likely, deverbal nouns of this sort are constructed in the course of the syntactic derivation, then there is a representation in which the verbal portion of this noun exists without its nominalizer. Imagine, for instance, that underlying (108b) is a representation like (109):

(109)

In (109) the required antecedent VP is embedded within the nominal; as in (90), it exists before movement has applied, in this case to form the deverbal noun. Perhaps, then, it is this VP which serves as antecedent to the ellipses in (108).

This is the solution that Fu et al. (1996) explore, and it has the apparently correct outcome that only deverbal nouns can act as antecedents to elided VPs. The examples in (108) contrast sharply with those in (110):

(110) a. *David Begelman is a great [artist], and when he does ▲, his eyes crinkle at you.

b. *The candidate was dogged by charges of [infidelity], or at least trying to ▲.

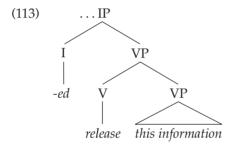This follows because the NPs in (110) have no verbal part, hence lack the crucial VP.

Perhaps something along these lines could also be put to use in explaining the fact that passive VPs can antecede active ones:

(111) a. This information could have been released by Gorbachev, but he chose not to ▲.
       b. A lot of this material can be presented in a fairly informal and accessible fashion, and often I do ▲. (Hardt 1993: (131), (134), 37)

And to a slightly less extent, it is also possible for active VPs to serve as antecedents to passive ones:
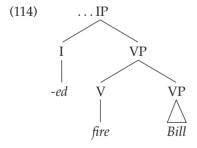
(112) ?John fired Max, although it was Bill who should have been ▲. (Fiengo and May 1994: 203, n. 10)

If we adopt the commonplace view of the passive/active alternation that it involves a syntactic derivation relating one to the other, we can find a point in this derivation at which antecedent and elided VPs are identical. For example, the first clause in (111a) has an underlying representation whose VP looks something like (113):

(113)
```
          . . . IP
         /       \
        I         VP
        |        /    \
      -ed      V       VP
               |      /    \
           release  this information
```

And this VP matches the one elided in (111a).

Nothing quite as simple is possible in (112), where an active VP serves as antecedent for a passive one. This is because even the underlying form of the passive VP (shown in (114)) does not match its active antecedent:

(114)
```
          . . . IP
         /       \
        I         VP
        |        /    \
      -ed      V       VP
               |        △
             fire      Bill
```

Instead, this case emerges as a special instance of the pseudogapping construction, at least if this construction is a form of VP ellipsis as outlined above. Recall that pseudogaps arise by virtue of emptying a VP-to-be-elided of the phrase which surfaces as remnant. Though we did not touch upon this at the

time, this account of pseudogaps requires that the antecedent clause also be able to have that very same form. So, for instance, the antecedent clause in (69a), repeated below, must also be able to be parsed so that the object (*Fred*) has Scrambled out of the VP:

(115)   While O. J. Berman read Fred, he didn't ▲ Dickens.

This is because the elided VP in (115) has the form [$_{VP}$ *read t*] (created by Scrambling *Dickens* out of the VP), which must be matched by a VP in the antecedent clause. Hence, *Fred* must also Scramble in (115). If true, this is not apparent in the overt form of these examples. But, in keeping with the derivational approach, it is conceivable that the LF representation for the antecedent clause has the object Scrambled out of the VP, producing the requisite antecedent. If that is possible in examples like (69a) (= (115)), then in cases like (112) too, it is conceivable that the antecedent clause hosts an invisible Object Scrambling. If the object in the antecedent clause of (112) were Scrambled, a VP of the form "[$_{VP}$ *fire t*]" would be produced, and this is just what is required to match the passivized VP in the ellipsis site.

  So in these few cases, there are derivational solutions to the mismatch in antecedent and elided VPs. The accounts of these cases sketched here, then, would rescue the derivational approach to ellipsis by weakening the syntactic identity condition just to the extent that vehicle change allows. So far as I can see, then, these facts do not provide grounds for entirely abandoning either (89i) or (89ii). (In fact, it may be possible to see an argument for (89i) and (89ii) in the restriction to deverbal nouns that the mismatches in (108) illustrate.)

  But there are other mismatches which are difficult to reconcile with a strict syntactic identity condition, and which do not fall under even a weakened version of this constraint. A very simply case of this sort, and one that is widely discussed, occurs when there is no apparent linguistic antecedent to the ellipsis at all, as in (116):[51]

(116)   [Mabel Minerva, a Central Park rental horse, begins galloping at full
        speed with the terrified Fred atop.]
        Fred: "No, no! Don't ▲!"

Where is the identical VP that is recovered in the ellipsis site of such examples? Does it not seem more reasonable to imagine that the ellipsis in such a case is a silent demonstrative, similar, perhaps, to *do that*? A typical response from the derivational camp is to deny the cavalier assumption that linguistic objects always result in speech. Perhaps there is a VP of the right form in (116) to antecede the ellipsis, but one that has simply gone unspoken. Or maybe discourses of this sort are sufficient to license an ellipsis of *do that*.

  A more difficult kind of counter-example, however, involves cases where the elided VP has split antecedents, as in (117) from Bonnie Webber (1978):

(117) Wendy is eager to sail around the world and Bruce is eager to climb Kilimanjaro, but neither of them can ▲ because money is too tight.

In these cases the elided VP has the content of none of the VPs occurring previously but seems instead to have cobbled together a meaning from the material in all those VPs. In (117), this material is brought together to form something close in meaning to *sail around the world or climb Kilimanjaro*. Obviously, then, there is no VP here which matches that of the elided one.[52]

So it is not unequivocal, but I think the evidence slouches towards the derivational interpretation of VP ellipsis. At the outset, I linked this interpretation of ellipsis with the ECP based account of where phrases can elide. This might be achieved, I suggested, if we saw the traces left by movement operations – whose distribution the ECP was designed to account for – as made of the same stuff as ellipses are. That is, if we conclude that ellipsis sites are made up of silent syntactic phrases, and not pro-forms, then we could see the similar distribution of traces and ellipsis sites as evidence that traces too are silent syntactic phrases. We could see in this evidence for the Copy and Delete interpretation of movement that Chomsky (1995b) champions.

But it is now clear that this linkage itself has been put at risk by the evidence reviewed above. While the mismatches between antecedent and elided VPs may not close the door on a derivational approach to ellipsis, they do make the strict syntactic identity condition on ellipsis look impossible. Traces, on the other hand, are thought to normally obey a very strict syntactic identity condition with their antecedent: a moved phrase is understood to be exactly the phrase that the trace constitutes. So if we hope to find the theory that determines where ellipses can be in the theory that determines where traces are, we would not be encouraged to do so by letting ellipsis sites and traces be the same thing.[53]

Instead, it seems to me that the most promising way to bring together the questions we have considered here is to, first, adopt an account of VP ellipsis that involves moving the elided VP, as outlined in the first section. This will derive the apparent match between movement and VP ellipsis, without committing us to an outright equation of ellipsis sites with traces. Second, we should abandon an account that sees elided VPs as kinds of null pro-form, for the reasons outlined in this final section. Instead we should seek answers to the (connected) questions: "What is an elided VP?" and "How is it licensed?" by turning to the other members of the ellipsis family: sluicing and N'-deletion. Here we will not be misled into thinking of the ellipsis sites as traces, because – apparently – these are ellipses whose licensing conditions are satisfied in situ. Recall that elided NPs and IPs do not arise in places where moved NPs and IPs do; maybe, then, this is because the conditions on ellipsis are nothing like those on movement. VP ellipsis misled us into thinking so because VP ellipsis involves moving the elided VP.

An elided VP is neither a pro-form nor a trace. It is a creature apart. And if we want to know why it is the way it is, we should look at the other members of its species.

NOTES

*   The level of this chapter has been considerably raised by the flood of comments I have received from Mark Baltin, Sigrid Beck, Chris Collins, Dan Hardt, Roger Higgins, Chris Kennedy, Anne Lobeck, Jason Merchant, Orin Percus, Eric Potsdam, and Satoshi Tomioka.

1   That *not* is the licensor in this configuration is shown by the contrasting ungrammaticality of *John is leaving, and Mary's ▲ too*.

2   And see Williams (1994a) and Potsdam (1997).

3   See Bresnan (1976) for an early discussion of this contrast. Lobeck accounts for this by restricting the licensing head government to terms that can have access to tense, something that main verbs are prevented from doing.

4   Lobeck and Zagona adopt the conditions on head movement that Chomsky (1986b) advocates. Lobeck's proposal has empirical consequences very close to that of Napoli (1985), who treats the stranded tensed auxiliaries as the anaphoric items in VP ellipsis.

5   Jason Merchant points out (personal communication) that there are examples parallel to these which are significantly better:

 (i)   Don't start the motor unless you're sure you know how to.

 (ii) Decorating for the holidays is easy if you know how to!

He suggests that we should review this paradigm with constraints on "sprouting" in mind. "Sprouting" is the name Chung et al. (1995) give to the process in sluicing by which a trace can be generated in an elided IP that is not matched by a parallel term in the antecedent IP. (iii) illustrates:

(iii) I know we should solve this problem, but I don't know how.

If VP ellipsis does not allow Sprouting, then we might see the variation in the *Wh*-Island Constraint under examination as actually reflecting whether the *wh*-phrase in these examples must bind a sprouted trace in the elided VP. See Lobeck (1995: 175ff) for a brief exploration of this idea.

6   She makes use of innovations to the Empty Category Principle that Rizzi (1990) offers; see Lobeck (1995: 177). She also suggests that (10b, c) are blocked by the inability of elided VPs to host the variable that the *wh*-phrases in these examples require. The second clause in the title of my chapter shows that this cannot be generally true, however.

7   Mark Baltin points out that (i) is rather good, and a counter-example to this generalization:

(i)   For Mary to leave wouldn't bother me, but [for Sally to ▲] would.

This is more in line with Zagona's description of the phenomenon, as in this situation *to* could get into licensing proximity to *for* without being brought out of the clausal subject.

8   Potsdam (1996b) proposes a similar scheme, but measures "closeness" in terms of Grimshaw's (1997) extended projections.

9   See Akmajian and Wasow (1975), Iwakura (1977), Akmajian et al. (1979), Huddleston (1978), Sag (1976), and Warner (1993), among others.

10   An observation of Sag's (1976: 29). And see Zagona (1988b), Lobeck (1987a), and Johnson (1988) for some discussion.

11   And this project should be informed by the sorts of crosslinguistic variation ellipsis tolerates. With respect to VP ellipsis, some of this variation is discussed in the cited works by Zagona and Lobeck, as well as McCloskey (1991) and López (1994).

12   There is some variability in the judgments, the source of which I cannot determine. Lobeck (1995), for instance, suggests that VP ellipsis within infinitival complements to nouns is grammatical, and offers (i) as evidence:

(i)   John's decision to run was unexpected, but Bill's decision to ▲ was completely predictable.

(ii)   Mary wanted to cheat on the exam, but she failed in her attempt to ▲. (Lobeck 1995: (62)–(63), 185)

The second of these examples does, indeed, sound rather good. The first, note, would also be a counter-example to VP ellipsis's susceptibility to the Subject Condition. Chris Kennedy provides other examples which seem to be an improvement:

(iii)   Sally explained why we were going to arrest Holly only after the decision to ▲ had already been made.

(iv)   My attempts to solve this puzzle are outmatched only by my desire to ▲.

Kennedy suggests that the comparative improvement these examples get should be related to the fact that these nouns are very verb-like.

13   It is necessary to understand the infinitive in (26a) as a rationale clause, i.e., as an adjunct; otherwise the sentence is grammatical, as expected. On Lobeck's approach, this paradigm would be captured by letting the government chain extend from *to* to the auxiliary verb(s) that follow(s).

14   As Ross (1967a) observes.

15   I owe this observation to Roger Higgins. Perhaps the exceptional licensing ability of *not* is connected to its ability to license the ellipsis in (i) (compare (ii)):

(i)   Mag left, and not Sally ▲.

(ii)   ?*Mag left, and Sally ▲.

Anne Lobeck suggests, in fact, that Baltin's "predicate ellipsis," which affects a wider class of phrases than just VPs (as in (6), for example) is in fact a different process than VP ellipsis – it does not meet the diagnostic properties of VP ellipsis that she catalogues (see Lobeck 1995: sec. 1.2). Because predicate ellipsis is licensed by *not*, there is the additional possibility that (30) is an instance of it.

16   See Ross (1967b).

17   And see Wasow (1972: 88ff).

18   See Hardt (1997) for additional discussion.

19   See Kennedy (1994). The (b)-example comes from Heim (1997), but represents cases Kennedy discusses.

20   The example he discusses is *Dulles suspected everyone who knew Philby, who Angleton did* ▲, which differs somewhat from the Kennedy/Sag examples, but falls under the generalization in (39).

21   This strategy requires that the index borne by the silent relative pronoun is not "accidentally" the same as that borne by the trace reconstructed into its scope.

22 The pronoun *he* is taken to be coreferent with the trace bound by the relative pronoun. On any other interpretation, this example falls into the case illustrated by (37a), and is ungrammatical.

23 See Tancredi (1992) and Fox (forthcoming) for attempts to collapse these two conditions.

24 See, for instance, Rooth (1992b).

25 At least it will if it is strengthened to prevent x and γ from getting exactly the same assignments from g (i.e., force x and γ to contrast).

26 Understand *she* in (53) to be non-coreferent with *Mag*. The subscript "F" indicates that the item it is attached to receives focus; in the cases at hand, this means that these items will have prominent accent.

27 Neither the contrast condition in (52), nor the particular way it is put to use in these examples, is faithful in details to Heim. I hope, however, that it is close enough to convey her proposal accurately.

28 See Heim's paper for details. As she notes, her technique will not extend to cases like Wasow's (i). Cases like Wasow's (i):

(i) [A proof that God$_2$ does ▲]$_1$ [t_1 exists].

29 Fiengo and May (1994) have a view similar to Wasow's.

30 Though note, as Bresnan does, that it is possible to find an antecedent for *it* in (56) through simple deduction. This, perhaps, explains the improvement (56) enjoys with thought; see Postal (1972) where this effect is elevated to a challenge to Bresnan's interpretation of the (55)/(56) contrast.

31 This argument for the derivational approach can be found in Tancredi (1992), and goes back at least to Chao (1987), who nonetheless holds the pro-form view of VP ellipsis.

32 Haïk (1987) and Kennedy and Merchant (1997) suggest that when the ellipsis would contain the island, the normal degradation associated with island violations is lost. Consider, by way of illustration, the examples in (i), which I owe to Dan Hardt:

(i) I know John explained why he wrote a letter to Susan, and I know Bill explained why he wrote a letter to Mary,
   a. ?but I don't know who Harry did ▲.
      ▲ = *explain why he wrote a letter to t*
   b. *but I don't know who Harry explained why he wrote a letter to.

Indeed, (ia) does sound better than the parallel (ib) and (59). Merchant and Kennedy suggest that this contrast can be accounted for by letting the island constraints hold before the ellipsis is resolved, and to let the ellipsis site itself be bound to the relevant operator. After the ellipsis is resolved, the operator will then pick up its "real" variable. In this way the island effects will be preserved between operator and ellipsis site, but not between the operator and (reconstructed) trace.

Still, in some cases I do find a contrast of the sort denied in (i):

(ii) a. ?I know that Rusty Trawler had met with SOMEone, but exactly WHO only FRED does.
   b. *I know whether Rusty Trawler had met with SOMEone, but exactly WHO only FRED does.
   c. *I read the report that Rusty had met with SOMEone, but exactly WHO only FRED did.

 d. *I left after Rusty met with SOMEone, but exactly WHO only FRED did.

33 These cases were introduced by Bouton (1970), who suggested an account not too different from the one relied on by Dan Hardt, and reviewed below.

34 But see Baltin (1987) and Wyngærd and Zwart (1991) for interesting alternatives.

35 See Holmberg (1986), Déprez (1989), and Vikner (1995).

36 Indeed, it is in the context of Antecedent Contained Deletion that Haïk demonstrated island effects:

 (i) *John met everyone that Peter wondered when he could ▲. (Haïk 1987: (18), 511)

37 (73b) and (73d) also speak against Hornstein's account of Antecedent Contained Deletion, which, recall, assimilates it to Object Shift. Object Shift is unable to strand a preposition, and this is what would be required of it in (73b); nor is it able to move noun phrases out of other noun phrases, as is necessary in (73d). (Examples illustrating the facts I report here about Object Shift can be found in Holmberg 1986.) This is Kennedy's 1997 point – that Object Shift is not the source of Antecedent Contained Deletion – but his arguments cut against a pseudogapping source for them as well.

38 Kuno (1981), for instance, marks cases like these ungrammatical.

39 The exception to this is the Scrambling of "R-pronouns," discussed in van Riemsdijk (1982); but modern English does not have this phenomenon (except in sluicing contexts).

40 The contrasts in the text would seem to be at odds with the Haïk/Kennedy and Merchant interpretation – described in n. 32 – of the island effects which arise in ellipsis examples. If pseudogapping is indeed VP ellipsis from which the remnant has extracted, then the ungrammaticality of these examples suggests that there is an island-effect holding of the remnant and the island in the ellipsis. The situation described in n. 32 involved redirecting the island effects so that they held on the relationship between the moved term and the ellipsis. This would not correctly hold for these examples if the judgments I have reported in the text are correct, though this technique could be employed to explain examples like Lobeck's.

41 Though there is plenty of fussing needed for this to come out accurately. So, for instance, Chris Collins notes that finite clauses make fine remnants from pseudogapping, but cannot Scramble in the Germanic languages. Perhaps this discrepancy could be shored up by considering the surface conditions that influence Scrambling – perhaps there is a ban against placing finite clauses in the middle field of German clauses (see, for instance, Stowell 1981). Jason Merchant notes (personal communication) that secondary predicates are incapable of undergoing long distance Scrambling in German and Dutch, but that they too make fine remnants for pseudogapping. It is more difficult to see how this discrepancy can be overcome. One possibility would be to see the constraints on Scrambling making a distinction between long distance and clause bound cases; it may be possible, especially under Zwart (1993a), to see secondary predicates

as undergoing local Scrambling. All that would be needed for the current proposal is for the phrases that can be remnants for pseudogapping to be susceptible to local Scrambling. I do not see presently, however, how this maneuver can preserve the ban against stranding a particle in pseudogapping.

42 Lasnik (1995f) offers a suggestion on this point, but not one that easily accommodates to the long distance cases in (78) and (79).

43 A similar example, but one that involves the relationship between a pronoun and the object, is:

(i) Mag introduced Sally$_2$ to his$_2$ attorney after Joe did ▲ José$_3$. ▲ ≠ *introduced to his$_3$ attorney*.

44 Thanks to Sally McConnell-Ginet and Anne Lobeck for this observation.

45 Hankamer and Sag (1976) make the same point: the Missing Antecedent phenomenon does not appear to be diagnostic of non-pro-forms.

46 This would mean, as they note, that the locality conditions we have witnessed in (59) must hold of resumptive pronouns as well as traces, assuming that vehicle change is available in this scenario as well. See Kennedy (to appear) for an extension of this idea to apparent examples of parasitic gaps within elided VPs (on which also see Kim and Lyle 1996).

47 See Sag (1976), Dalrymple et al. (1991), and Hardt (1993) for a discussion of cases like these.

48 See Fiengo and May (1994: 218ff), and Wyngærd and Zwart (1991) for an application to Antecedent Contained Deletion.

49 One class of interesting cases, which bear on the strictness of the syntactic identity condition between antecedent and elided VPs, involves the scope of quantifiers. As Sag (1976) discussed, there are certain situations where the scope of a quantifier in the *antecedent* VP is influenced by the ellipsis it supports. For example, the wide-scope reading for *everyone* in (i) is lost when it supports the ellipsis in (ii):

(i) Someone loves everyone.

(ii) Mary doesn't ▲.

Sag thought this was always true, and built his version of the syntactic identity condition around facts of this sort. But Hirschbühler (1982) introduces examples which show that this is not the case; in (iii), for example, *many building*s may have widest scope in the left conjunct:

(iii) A Canadian flag is in front of many buildings and an American flag is ▲ too.

Fox (1995) develops an approach to Quantifier Raising that will allow this effect to be derived from the syntactic identity condition, whereas Tomioka (1997) develops an approach which derives it from the contrast condition.

50 See Lasnik (1995a) for this idea, and for evidence that auxiliary verbs differ on this score; and see Potsdam (1996a) for problems with Lasnik's characterization of the main verb/ auxiliary verb distinction, and an alternative account based on processing considerations.

51 First famously observed in Schachter (1977b).

52 In general, these instances of split antecedence seem best in contexts where the antecedent VPs are in conjoined clauses. This has led Fiengo and May (1994: 194–200)

to propose that the operation responsible for coordination is itself equipped with the power of fashioning the elided VP in these cases. See Hardt (1997) for a different approach.

53 On the other hand, Hardt (1993) points out that in cases where movement relates a VP to a trace, there are mismatches which look somewhat like those we have just reviewed. For instance, in (ia), there appears to be an invocation of vehicle change; and in (ib) we appear to have a case of split antecedence:

(i) a. We wanted to phone our parents, which Harry also did.

(= We wanted to phone our parents, and Harry wanted to phone his parents.)

b. John wanted to go to India and Harry wanted to go to China, which it turned out they couldn't.

I do not find these fully grammatical, however. Instead, they sound to me as if they are of the same register that allows:

(ii) I've been considering going to Denver, which I don't know whether it is such a good idea.

in which *which* has the syntax of a coordinator. If so, then (i) could involve VP ellipsis, rather than true VP relatives.