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6

Pseudogapping Puzzles

Howard Lasnik

In this chapter, I explore some of the properties of the so-called pseudogapping construction. This construction is in important respects reminiscent of *VP* ellipsis, except that it leaves behind an element of the *VP* as a remnant. I begin by summarizing the analysis of Lasnik (1995c), which is based on the important proposal of Jayaseelan (1990) that pseudogapping is simply *VP* ellipsis, with the remnant having moved out of the *VP*. I argue that Jayaseelan's basic proposal is correct, except for the specific movement rule he invokes, heavy *NP* shift. I argue, instead that the movement rule involved is "object shift," overt raising to Spec of *Agr_o*. In the course of the presentation, I deal with a number of puzzles that arise, among them certain cases of apparent overgeneration. Finally, I consider the proposal of Bouton (1970) and Lappin (1992) that "antecedent-contained deletion" is derived via pseudogapping, and argue, along with Fiengo and May (1992), that the proposal is only half right, accounting for some *ACD* instances but not others. I conclude by discussing alternative hypotheses for the latter type of *ACD*.

I am indebted to Cedric Boeckx, Željko Bošković, and an anonymous reviewer for valuable suggestions on this research, and to Cedric Boeckx for editorial assistance.

6.1 General Properties of Pseudogapping

The ellipsis phenomenon in (1) displays some properties of gapping (there is a right side remnant) alongside some properties of *VP* ellipsis (there is a finite auxiliary):

- (1) John will select me, and Bill will you.

Sag (1976) presents a number of instances, suggesting that they relate to *VP* deletion, and tentatively concluding that *VP* deletion must therefore be formulated as

a rule deleting a variable (rather than specifically a *VP*), since a portion of the *VP* survives the deletion. The following are all from Sag (1976), with (4) and (5) cited from Halliday and Hasan (1973):

- (2) John could pull you out of a plane, like he did \emptyset his brother.
- (3) Mary hasn't dated Bill, but she has \emptyset Harry.
- (4) Is she suing the hospital? She is \emptyset the doctor.
- (5) Has he sold his collection yet? He has \emptyset some of his paintings; I'm not sure about the rest.
- (6) Gee, I've never seen you on campus before. Yea! Neither have I \emptyset you.

Levin (1978, 1979/1986) provides an extensive examination of this type of ellipsis, and employs the name it is now standardly associated with: pseudogapping. Among her many examples are the following, all from Levin (1978), and all marked ? by her:

- (7) If you don't believe me, you will \emptyset the weatherman.
- (8) I rolled up a newspaper, and Lynn did \emptyset a magazine.
- (9) Kathy likes astronomy, but she doesn't \emptyset meteorology.

By and large, the best instances of pseudogapping involve an *NP* or *PP* remnant. Levin (1978) cites the following unacceptable examples with adjectival remnants:

- (10) *You probably just feel relieved, but I do \emptyset jubilant.
- (11) *Rona sounded annoyed, and Sue did \emptyset frustrated.
- (12) These leeks taste terrible.
*Your steak will \emptyset better.

6.2 Toward an Analysis

With this much as background, I turn now to a consideration of just what pseudogapping is. While in many instances it might appear that the process is simply elision of the main verb, there is considerable evidence that more is involved. There are clear instances in which far more than just the main verb is elided:

- (13) The *DA* proved Jones guilty and the Assistant *DA* will ~~prove~~ Smith guilty.
- (14) ?John gave Bill a lot of money, and Mary will ~~give~~ Susan ~~a lot of money~~.

Examples (2) and (6) above also display elision of more than the verb.

Rejecting the possibility of an ellipsis rule affecting a discontinuous portion of the structure (as seen in (13) and (14), for example), Jayaseelan (1990) proposes that pseudogapping constructions result from *VP* ellipsis, with the remnant having moved out of the *VP* by heavy *NP* shift. I will argue that this proposal is correct in its essentials, though wrong in certain details. In particular, I will begin by providing evidence that pseudogapping does not entirely correlate with the possibility of heavy *NP* shift. I have already illustrated pseudogapping with the first object in a double object construction as remnant. But the first object in a double object construction is resistant to undergoing *HNPS*:

- (15) ?John gave Bill a lot of money, and Mary will ~~give~~ Susan ~~a lot of money~~.
- (16) *John gave *t* a lot of money the fund for the preservation of VOS languages.

Conversely, the second object is a poor pseudogapping remnant, but freely undergoes *HNPS*:

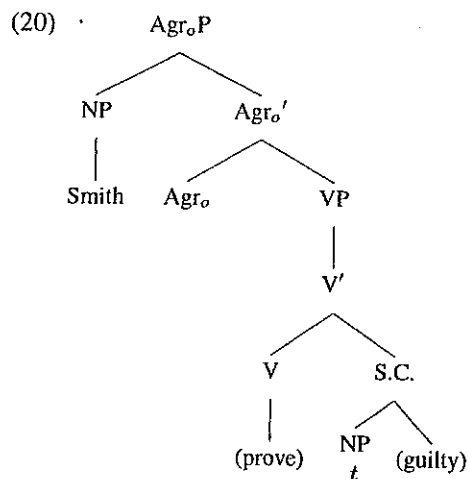
- (17) *John gave Bill a lot of money, and Mary will ~~give~~ Bill a lot of advice.
- (18) John gave Bill *t* yesterday more money than he had ever seen.

Jayaseelan's core idea, that pseudogapping involves *VP* ellipsis with prior movement of the remnant out of the *VP*, is very attractive, but an alternative to *HNPS* must be found if it is to be preserved. Note that in all the acceptable examples considered so far the remnant is accusative: either the direct object in a simple transitive construction, or the first object in a double object construction, or an exceptionally Case-marked subject of a complement. Given this, it is very tempting to posit raising to Spec of *Agr_o*, as first suggested for Accusative Case checking by Chomsky (1991), as the sought-after alternative to *HNPS*.

Under standard assumptions (though ones I will question shortly), raising of accusative *NP* to Spec of *Agr_o* is covert, taking place in the *LF* component. Given Jayaseelan's goal, adopted here, of analyzing pseudogapping as affecting a constituent, this ellipsis process must then be analyzed as copying in the *LF* component, rather than deletion in the *PF* component. Consider (13), repeated as (19).

- (19) The *DA* proved Jones guilty and the Assistant *DA* will ~~prove~~ Smith guilty.

By hypothesis, *prove guilty* is not a constituent in overt structure. However, in the *LF* component, following raising of *Smith*, the elided material could form a constituent. If the *LF* copying process can peer into the *LF* derivation, a possibility discussed by Hornstein (1994), then potentially there is a relevant stage where the accusative *NP* has raised out of the "small clause" but the *V* has not yet raised, as illustrated in (20).



The ellipsis site could then be *VP*.

One argument offered by Jayaseelan for his *HNPS* account has potentially significant implications for any Spec of *Agr_o* analysis of the remnant, so I turn to that argument now. Jayaseelan notes, following van Riemsdijk (1978) among others, that the object of a preposition may not undergo *HNPS*:

- (21) *John counted on *t* for support a total stranger.

He then indicates that pseudogapping is similarly impossible:

- (22) *You can't count on a stranger; but you can ~~count on~~ a friend.

As Jayaseelan further notes, typical *A*-movement can strand the preposition in this construction:

- (23) A total stranger was counted on *t* for support.

All else being equal, given the reanalysis responsible for (23), it is not clear why the object of the preposition cannot be a pseudogapping remnant on a Spec of *Agr_o* account. The logic of the situation is clear, the facts perhaps less so. Levin (1979/1986) indicates that objects of prepositions *can* be pseudogapping remnants, and makes the provocative suggestion that the best cases "are likely those whose preposition forms a constituent with the verb rather than the following *NP*." Presumably she has reanalysis in mind. Levin's example (24), offered by her as acceptable, is consistent with that speculation.

- (24) You have to sign onto it [the printer] like you do \emptyset the terminal.

The possibility of pseudopassive with this predicate indicates that reanalysis is available:

- (25) The terminal must be signed onto.

The general patterning of data reported by my informants is in accord with Levin's suggestion. Judgments are delicate, since even the best instances of pseudogapping are somewhat degraded, but they find a consistent correlation between pseudogapping and pseudopassive. Their judgments, and my own, are that (26a) and (27a) are more acceptable than (28a) and (29a), in rough accord with the possibility of pseudopassive, as seen in the (b) examples.

- (26) a. John spoke to Bill and Mary should Susan.
b. Bill was spoken to by John.

- (27) a. John talked about linguistics and Mary will philosophy.
b. Linguistics was talked about by John.

- (28) a. *John swam beside Bill and Mary did Susan.
b. *Bill was swum beside by John.

- (29) a. *John stood near Bill and Mary should Susan.
b. *Bill was stood near by John.

Even more extreme instances of reanalysis, as in (30), support pseudogapping (31) in the manner of (26) and (27) rather than (28) and (29).

- (30) Bill was taken advantage of by John.

- (31) John took advantage of Bill and Mary will Susan.

None of these structures, either the better ones like (26), (27), (30), and (31), or the worse ones, like (28) and (29), support *HNPS*:

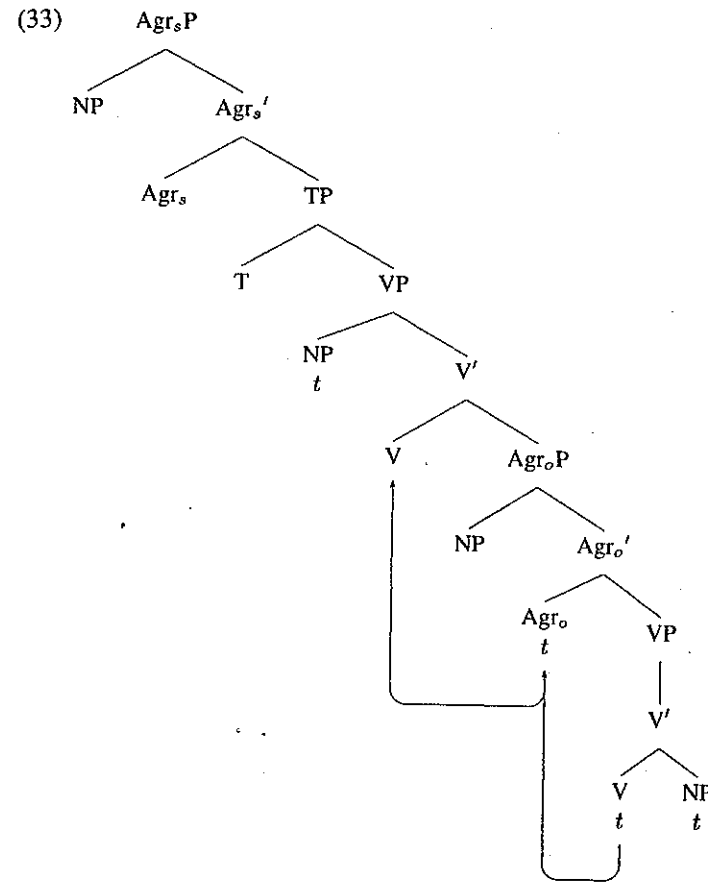
- (32) a. *John spoke to yesterday the man he met at the beach.
b. *John talked about yesterday the man he met at the beach.
c. *John took advantage of yesterday the man he met at the beach.
d. *John swam beside yesterday the man he met at the beach.
e. *John stood near yesterday the man he met at the beach.

These phenomena thus provide some additional evidence against an *HNPS* account of pseudogapping and in favor of an *A*-movement account.

Earlier I indicated that under standard assumptions, the Spec of Agr_o analysis advocated here would require an *LF* copying theory of ellipsis, since the structure necessary for ellipsis is not created in overt syntax. However, on the theory of *LF* movement advocated by Chomsky (1995b), and further defended by Lasnik (1995a,b), the necessary structure would not even be created in covert syntax. On that theory, when movement is triggered by the need for formal features to be checked, all else equal only formal features move. When movement is overt (triggered by a *strong* feature), *PF* requirements demand that an entire constituent move, via a sort of pied piping. However, when movement is covert, *PF* requirements are irrelevant, so economy dictates that movement *not* be of the entire constituent. But then it is very difficult to see how covert raising of (the formal features of) accusative *NP* to Spec of Agr_o could possibly create an ellipsis licensing configuration.

It seems then that if movement creates a configuration licensing ellipsis, the movement must be overt rather than covert. Before I explore how that might be possible in the present instance, I note that if the movement is overt, then the conclusion above, that ellipsis must involve *LF* copying, no longer follows. If the licensing configuration must be created prior to the *LF/PF* split, then ellipsis could just as easily be a *PF* deletion phenomenon. Interestingly, that sort of analysis of ellipsis has been consistently advocated by Chomsky (1995a,b), or, much earlier, in a 1971 lecture cited by Wasow (1972), where, according to Wasow, Chomsky "suggests that *VP* deletion and Sluicing can be formulated as very late rules which delete unstressed strings."

I have noted that the standard view of accusative Case checking in English is that it is facilitated by covert movement, but for raising to Spec of Agr_o to be the process making an *NP* into a pseudogapping remnant, it must be overt. Further, the verb in the pseudogapping construction must remain behind in the *VP* in overt syntax. This raises an important question: Is the special property of pseudogapping that the accusative *NP* does raise overtly, or that the verb doesn't? I suggest the latter. Koizumi (1993, 1995), developing ideas of Johnson (1991), proposes that the relevant *NP* movement is always overt, and that (given the word order of English) the accusative checking *V* also raises overtly to a still higher position. Koizumi's specific proposal, which he calls the split *VP* hypothesis, is that *V* raises to a higher "shell" *V* position, as shown in (33):



The raising of *NP* and the raising of *V* must both be driven by strong features. In Lasnik (1995a,b) I offer several arguments for a Koizumi-type approach, and I suggest that the *NP* raising is driven by an *EPP* feature that resides in Agr_o . Further, following Chomsky, I assume that Agr_o and Agr_s are really the same category, the distinction merely mnemonic. Overt object shift and overt subject shift are then the same phenomenon: satisfaction of the *EPP*.

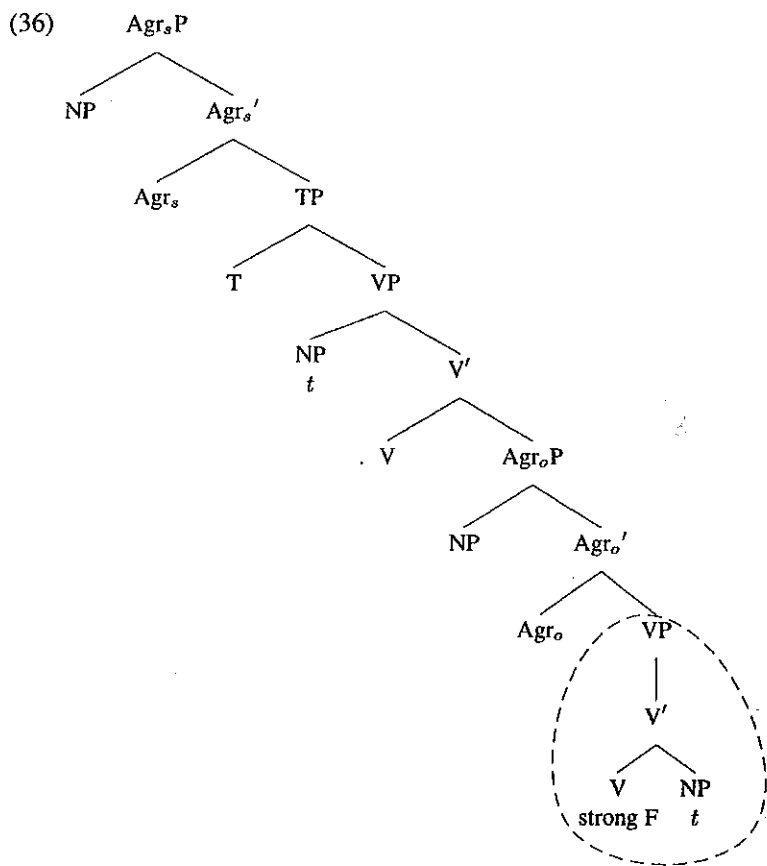
The question that now arises is why the *V* need not raise in pseudogapping constructions, given that in nonelliptical sentences it must:

(34) Mary hasn't dated Bill, but she has Harry [_{VP} dated-t].

(35) *She has Harry dated.

I have not yet discussed the strong feature driving *V* raising. Suppose that that feature is a feature of the *V* that raises (rather than of the position it raises to). A promising possibility is that the feature is a θ -feature, given Koizumi's theory

that the subject is base generated in the Spec of the higher *VP*.¹ Now suppose, following Chomsky (1993) but contra Chomsky (1995a), that an unchecked strong feature is an ill-formed *PF* object. Then we correctly derive the result that deletion of (a category containing) an item with an unchecked strong feature salvages the derivation. The portion of the structure that would have caused a *PF* crash is literally gone at that level.²

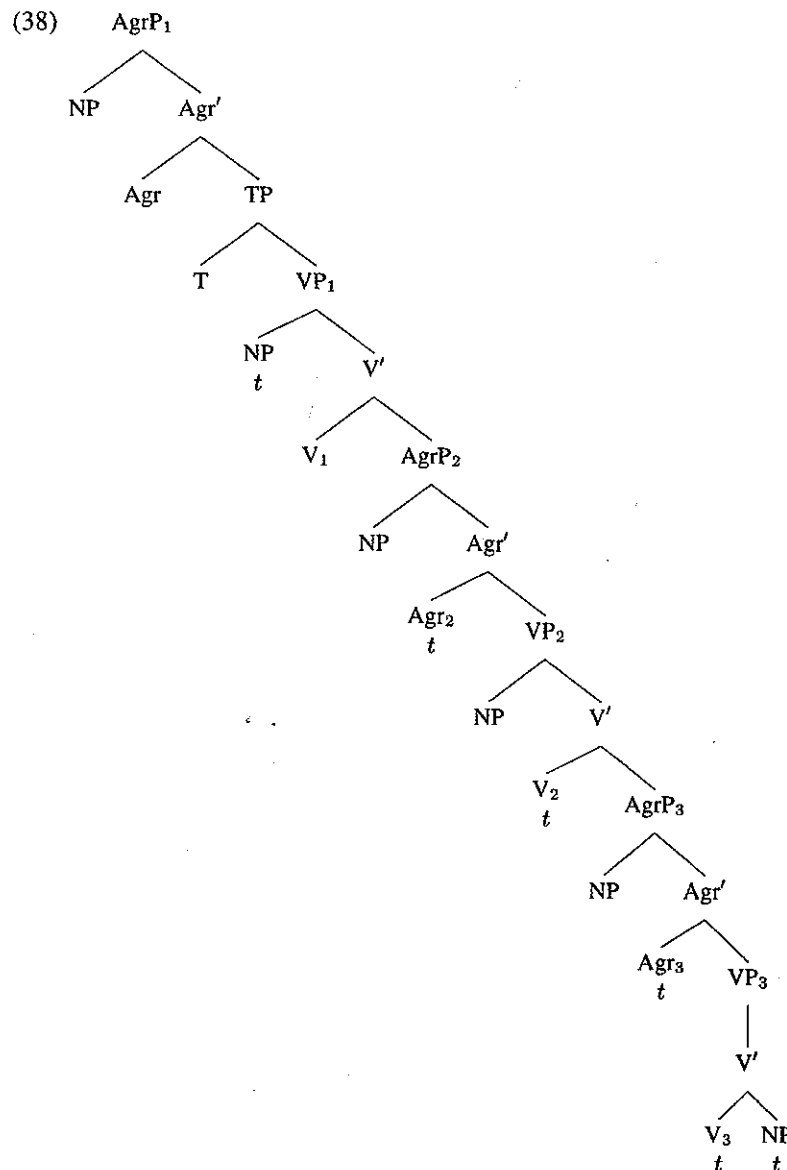


Consider now sentences with two complements. Given a natural extension of Koizumi's approach, there will be *three VPs*, one for each of the arguments. The structure for (37), a double object construction, is shown in (38), with the *VPs* and *AgrPs* labeled with subscripts for ease of exposition.

(37) John gave Bill a lot of money.

¹See Bošković and Takahashi (in press) for a powerful argument that θ -features are strong formal features in English.

²The *V* is, of course, still present in the *LF* component, and in that component is free to raise, checking its feature.



Recall that the first object in a double object construction makes an acceptable pseudogapping remnant, as seen in (15), repeated as (39).

(39) ?John gave Bill a lot of money, and Mary will give Susan a lot of money.

The analysis of this example is fairly straightforward. The Spec of *VP*₂, the "first object," overtly raises to Spec of *AgrP*₂, and *VP*₂ undergoes *VP* deletion in the

PF component. So far, it is impossible to tell whether the lowest *NP*, the "second object," overtly raises to Spec of *AgrP*₃, and *V*₃ overtly raises to *V*₂, via *Agr*₃. By *LF*, of course, these raisings must take place, along with the further raising of *V* to *V*₁. But since *VP*₂ will delete, any checked or unchecked features it contains will be absent at the level of *PF*, so they could not cause a *PF* crash.³ Thus, the raisings could evidently be covert.

Apart from the still mysterious failure of *HNPS* to create pseudogapping remnants, the inability of the second object to be a remnant is accounted for. Consider (17), repeated as (40).

(40) *John gave Bill a lot of money, and Mary will give Bill a lot of advice.

Under the assumption, tacitly adopted above, that the first object begins higher than the second,⁴ relativized minimality will guarantee that the first object remains higher. The consequence of this is that there could not be a *VP* (or any other constituent) to delete which includes the first object but excludes the second.

6.3 On the Marginal Character of the Construction

At this point I take up a property of pseudogapping constructions that I have put aside: The construction has a certain marginal character. Recall that my *PF* deletion analysis, coupled with the Chomsky (1993) position that a strong feature not overtly checked causes a *PF* crash, explains why pseudogapping is possible at all. The unchecked strong feature of the *V* that fails to raise is remedied by deletion of the the *VP* containing that *V*. Chomsky (1995a), though, replaced the *PF* crash analysis of strong features with an *LF* analysis, proposing that unless a strong feature "is checked before Spell-Out it will cause the derivation to crash at *LF*." Chomsky instantiates this in the following way: "a checked strong feature will be stripped away by Spell-Out, but is otherwise ineliminable." If the marginal character of pseudogapping is to be analyzed as a consequence of grammatical properties, I offer the speculation that the proposals of Chomsky (1993, 1995a) are both correct. Then a strong feature that is not checked in overt syntax will cause the derivation to crash at both *PF* and *LF*. A standard *EPP* violation will fall under this analysis, as will a sentence in which a verb fails to raise overtly, yet survives to the level of *PF*, as in (35) above, repeated as (41).

(41) *She has Harry dated.

When, on the other hand, a constituent containing the verb is deleted, the *PF* violation is avoided, but the *LF* violation persists. The relevant example is the pseudogapping analogue of (41), namely (34), repeated as (42).

³Later, we will see some indirect evidence that the overt raising of *V* to *V*₂ does, indeed, take place, as does that of the second complement to Spec of *Agr*.

⁴Larson (1988) argues against this, but the binding theoretic phenomena (from Barss and Lasnik 1986) that provided the major impetus for his analysis are easily accommodated on the present point of view.

(42) Mary hasn't dated Bill, but she has Harry [~~*VP* dated *t*~~].

Now the question is whether this example has the predicted status. What is the predicted status? Not that of a standard *EPP* violation, obviously, since that would cause both a *PF* and an *LF* violation. In fact, the only sort of example currently available for comparison is the type that leads Chomsky (1995a) to modify his either (1993) theory. Chomsky is concerned to prevent, without stipulation, lexical insertion in the *LF* component. For a lexical item bearing phonological features, the mechanism is straightforward: The phonological features will cause the derivation to crash at *LF*. But this will not be the case for a lexical item lacking phonological features. Chomsky indicates that "empirical consequences seem to arise only in connection with functional heads that have 'strong features.'" The one case he considers (though only in the abstract) is that of *C* with a strong feature that requires overt *wh*-movement. If such a *C* is introduced covertly, it could not constitute an ill-formed *PF* object. Hence, Chomsky's modified (1995a) theory, but not his earlier (1993) theory, would provide an account of the unacceptability of (43) as a *wh*-question.

(43) (*)You read what.

Note that the much more extreme unacceptability of (44) is not at issue, given Chomsky's requirement that lexical insertion, whether overt or covert, is always at the root.

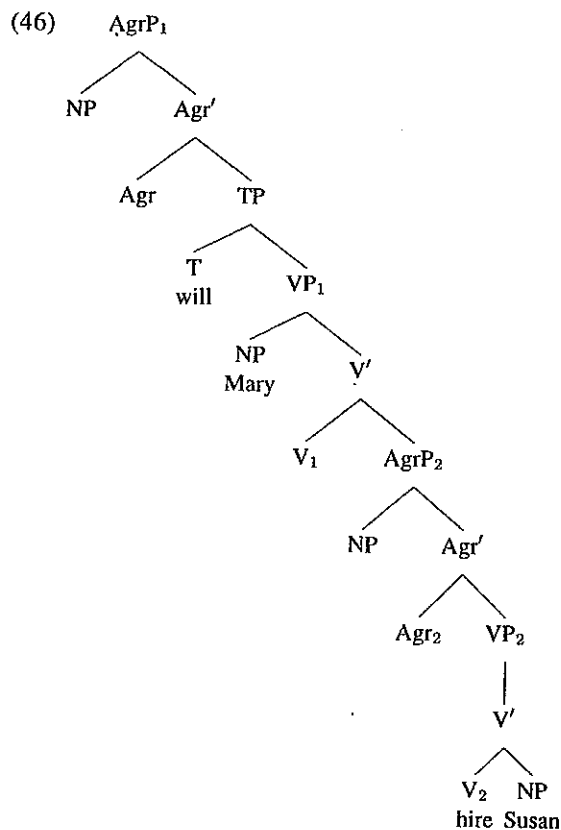
(44) *I wonder you read what.

Example (43) is undoubtedly somewhat degraded. Its exact status is open to question; but the same could be said of pseudogapping examples. Further research is required, but at this point there is no clear basis for rejecting the possibility suggested here that a strong feature that is unchecked in overt syntax potentially causes an *LF* crash and a *PF* crash. Example (43) and baseline pseudogapping examples instantiate only the *LF* crash, though for different reasons. In the former case, the strong feature isn't introduced until the *LF* component; in the latter, the strong feature is deleted (along with the *VP* containing it) on the way to the *PF* interface.

6.4 Pseudogapping vs. Standard VP Ellipsis

Since I have analyzed pseudogapping as *VP* deletion, one might wonder how classic *VP* deletion is then to be treated, particularly with a transitive verb. In fact, the analysis is straightforward. Consider (45) with underlying structure (46).

(45) Mary will hire Susan.



As I have shown, if *Susan* raises to Spec of *Agr*₂ and *hire* remains in *VP*₂, then deletion of *VP*₂ results in pseudogapping:

(47) ...Mary will Susan.

Further, note that if *Susan* does not raise and *VP*₂ deletes, though "Mary will" would be generated, the resulting structure would have two unchecked strong features, the *EPP* feature of *Agr*₂ and the strong (θ -)feature of *hire*. Given that classic *VP* ellipsis is completely acceptable (given the appropriate discourse circumstances, etc.), there must be some other derivation for it. And in fact an alternative derivation is readily available. Beginning again with (46), suppose *Susan* raises to Spec of *Agr*₂ and *hire* raises to *V*₁ via *Agr*₂. With raising of *Mary* to Spec of *Agr*₁, all relevant features are checked. Deletion of *VP*₁ now yields (48) in a violation-free way.

(48) ...Mary will.

6.5 Potential Problems for the Account

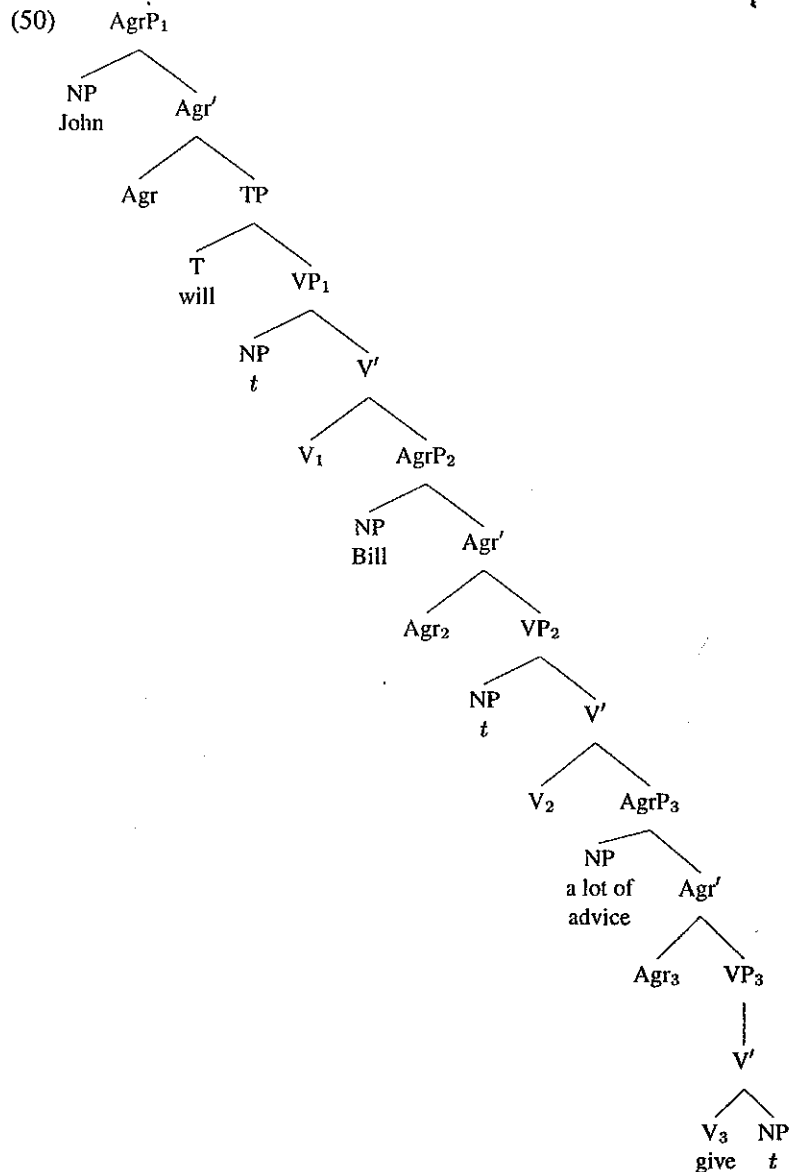
6.5.1 Double Object Constructions

While the account of pseudogapping sketched so far has accounted for a substantial range of facts, and has done so without the need for a new ellipsis rule, it is not entirely unproblematic. In particular, there seems to be significant overgeneration. I turn now to this problem.

Consider first (49), a pseudogapping example with two remnants.

(49) *Mary gave Susan a lot of money, and John will ~~give~~ Bill a lot of advice.

As far as I can tell, all examples with this pattern are seriously degraded. The question is why (49) shouldn't be well-formed with structure (50), with *VP*₃ elided.



However, as Roger Martin (personal communication) first observed, on the general account of pseudogapping I have given, a rather natural explanation is available. Recall that I explained the general marginality of even the best instances of pseudogapping by proposing that the strong feature driving overt raising of the *V* to the higher *V* position causes both a *PF* and an *LF* violation, if the overt raising does not take place. Further, I proposed that the strong feature resides in the lexical *V* itself, rather than in the shell *V* that it raises to. Deletion eliminates the *PF* violation, but not the *LF* one. Now notice that in (50), there are *two* shell *V*s to which *give* has not overtly raised, hence two strong features that have not been overtly checked, not just one, so plausibly the violation should be more severe.⁵

Considerably more problematic is (51).

(51) *Mary gave Susan a lot of advice, and John will give Bill a lot of advice.

Example (51) is somewhat similar to (49) except that the violation should have been remedied. The verb *give* has overtly raised to its correct ultimate destination, passing through the intermediate shell *V* in transit, as illustrated in (52).

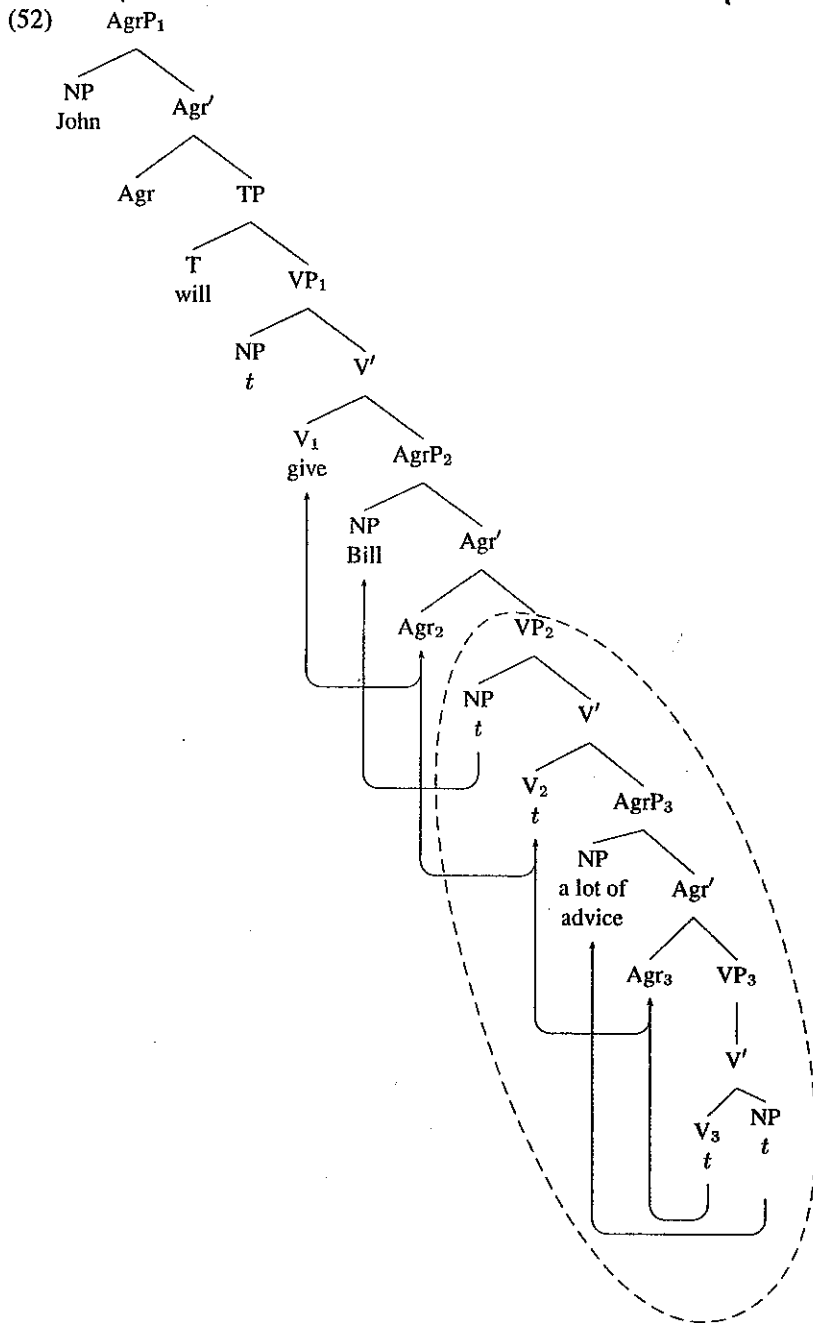
⁵A range of "degree of grammaticality" phenomena can be similarly analyzed. For example, Bošković (1997) considers the contrast between the very bad (i) and the even worse (ii).

- (i) *John_i is likely *t_i* sleeps often.
 (ii) **Is likely John sleeps often.

Bošković observes that while (ii) violates both the Inverse Case Filter and the *EPP*, (i) violates only the first of these conditions. The Inverse Case Filter is the requirement that a Case licenser actually license a Case, thus discharging its Case feature. If the *EPP* is also the requirement that a feature be checked, perhaps the *D*-feature suggested by Chomsky (1995b), the situation at hand is strikingly parallel to the one in the text: *Infl* has one unchecked feature in (i), and two in (ii). Epstein (1990) provides another instance in a classic study of degrees of grammaticality. Epstein argues against the "Visibility" reduction of the Case Filter to the Theta Criterion on the grounds that speakers systematically distinguish between examples that violate both the Case Filter and the Theta Criterion (iii), on the one hand, and those that violate only the Case Filter (iv), on the other hand.

- (iii) **I hope John to be likely that John left.
 (iv) *I hope John to think that Bill left.

If, as proposed in the text, arguments have theta features that need to be checked, in (iii) *John* has two unchecked features (Case and theta), while in (iv) *John* has only an unchecked Case feature. So once again, there is reason to think that two unchecked features cause more extreme deviance than one. I am grateful to an anonymous reviewer for pressing me to make this connection more explicit, and to Cedric Boeckx for extremely helpful discussion.



Note that it is the intermediate *VP*, *VP*₂, that has been deleted. If *VP*₃ had been deleted instead, the absence of *a lot of advice* in the phonetic output would entail that that *NP* had not overtly raised to SPEC of *Agr*₃. But then the *EPP* feature of *Agr*₃ would not be checked in overt syntax, causing both an *LF* and a *PF* violation (and the latter would not be remedied, since the deletion site would not include *Agr*₃). However, with *VP*₂ deleted, *a lot of advice* could have raised to SPEC of *Agr*₃, evidently avoiding all strong feature violations. Yet the result is clearly bad. What is responsible?

Descriptively speaking, the situation is somewhat perverse. When the verb remains in *VP*, the *VP* can delete, as in standard *VP* ellipsis, and its pseudogapping alternate. But when the verb has raised out of *VP*, the *VP* it has left behind apparently cannot delete. One might hypothesize a constraint to this effect (though almost immediately we will be forced to reject it):

- (53) *VP* ellipsis constraint: *VP* ellipsis is prohibited if *VP* has lost its head.

Intriguingly, another ellipsis process seems to obey a similar constraint. Sluicing, a process first investigated by Ross (1969), is standardly (and plausibly) analyzed as *wh*-movement followed by *IP* deletion:

- (54) Speaker A: Mary saw someone.
Speaker B: I wonder who Mary saw.

Sluicing is also possible in the matrix:⁶

⁶Such matrix sluicing instances raise an interesting question. If the source of (i) is (ii), then what is deleted must be *C'* rather than *IP*, since *I* has raised to *C*.

- (i) Who?
(ii) Who did Mary see?

This is problematic under the fairly standard assumption that rules of grammar don't target intermediate projections. If, on the other hand, *I* has not raised, the mystery is why the hypothesized source is unacceptable:

- (iii) *Who Mary saw.

Further, the phenomenon is independent of *do*-support:

- (iv) Mary will see someone.
Who?
(v) *Who Mary will see?

This state of affairs is strikingly reminiscent of what we saw earlier with the hypothesized source of simple pseudogapping:

- (iv) John saw Bill and Mary did/will Susan (*see).

The same solution might also be possible. It is standardly assumed that there is a strong feature forcing the movement of *I* to *C* in matrix *wh*-questions. Suppose, contrary to the standard assumption, that the strong feature resides in *I* rather than in *C*. (That is, there is something special about matrix *I* in an interrogative.) Then, raising will be necessary unless ellipsis eliminates the offending feature. Still unexplained, though, is the fact that while pseudogapping is marginal sluicing is perfect.

- (55) Speaker A: Mary saw someone.
Speaker B: Who?

Surprisingly, though, if *Infl* has raised to *C*, sluicing is blocked:

- (56) Speaker A: Mary saw someone.
Speaker B: *Who did Mary see?

This is abstractly parallel to what we just saw with pseudogapping, suggesting a generalization of (53):

- (57) *XP* ellipsis is prohibited if *XP* has lost its head.

However, there is evidence even against the more limited version of the constraint (53). A number of languages with overt *V* raising to *I* nonetheless allow *VP* ellipsis, with the effect that everything in the *VP* except the *V* is deleted. Doron (1990) shows this for Hebrew:

- (58) Q: Salaxt et ha-yeladim le- beit-ha-sefer
you-sent Acc the kids to school
Did you send the kids to school?
A: Salaxti
I sent.
I did.

Martins (1994) shows the same thing for Portuguese and McCloskey (1990) does for Irish:

- (59) A Martas deu um livro ao João? Sim, deu.
the Martha gave a book to-the John yes gave
Did Martha give a book to John? Yes, she did.
- (60) Q: Ar chuir tú isteach air
INTERR COMP put [PAST] you in on it
Did you apply for it?
A: Chuir
put [PAST]
Yes.

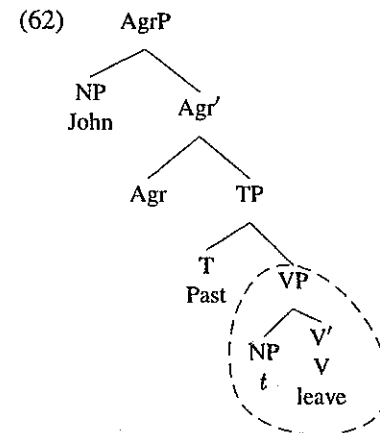
It seems clear, then, that ellipsis of a *VP* whose head *V* has raised away is not generally prohibited. The explanation for (51) must lie elsewhere.

In order to pursue this problem further, I would like to briefly examine the licensing condition for *VP* ellipsis. Zagana (1982, 1988),⁷ it has been assumed that

⁷See Lobeck (1990) as well.

there is an *ECP*-like constraint on *VP* ellipsis: The ellipsis site must be governed by an appropriate head. I will adopt this assumption as well, though how to capture the effects of such a constraint within a minimalist framework is a difficult and important question that I will have to put aside here.⁸ Saito and Murasugi (1990) explicitly argue that not just any head, even any lexically realized one, can function as a proper governor in this sense. Martin (1992, 1996)⁹ provides very strong evidence that in the instance of *VP* ellipsis, the licensing head is a particular sort of *Infl*, with tense being the crucial feature. Consider then the licensing configuration in grammatical instances of *VP* ellipsis, first a simple case as in (61).

- (61) Mary left, and John did too.



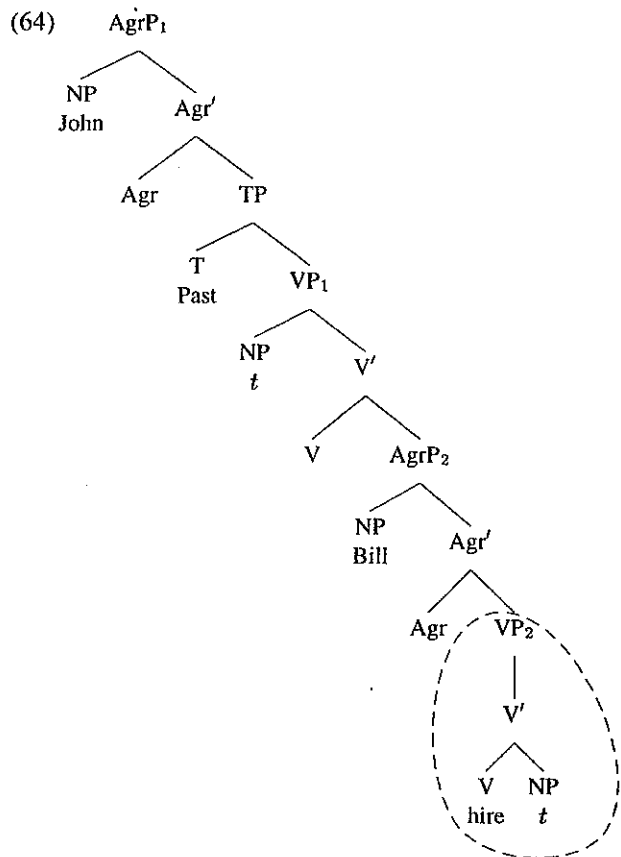
Here, under any imaginable notion of government, the Tense head governs the *VP* that is to be deleted.

Next consider a baseline instance of pseudogapping, a process I have analyzed as *VP* ellipsis.

- (63) Mary hired Susan, and John did Bill.

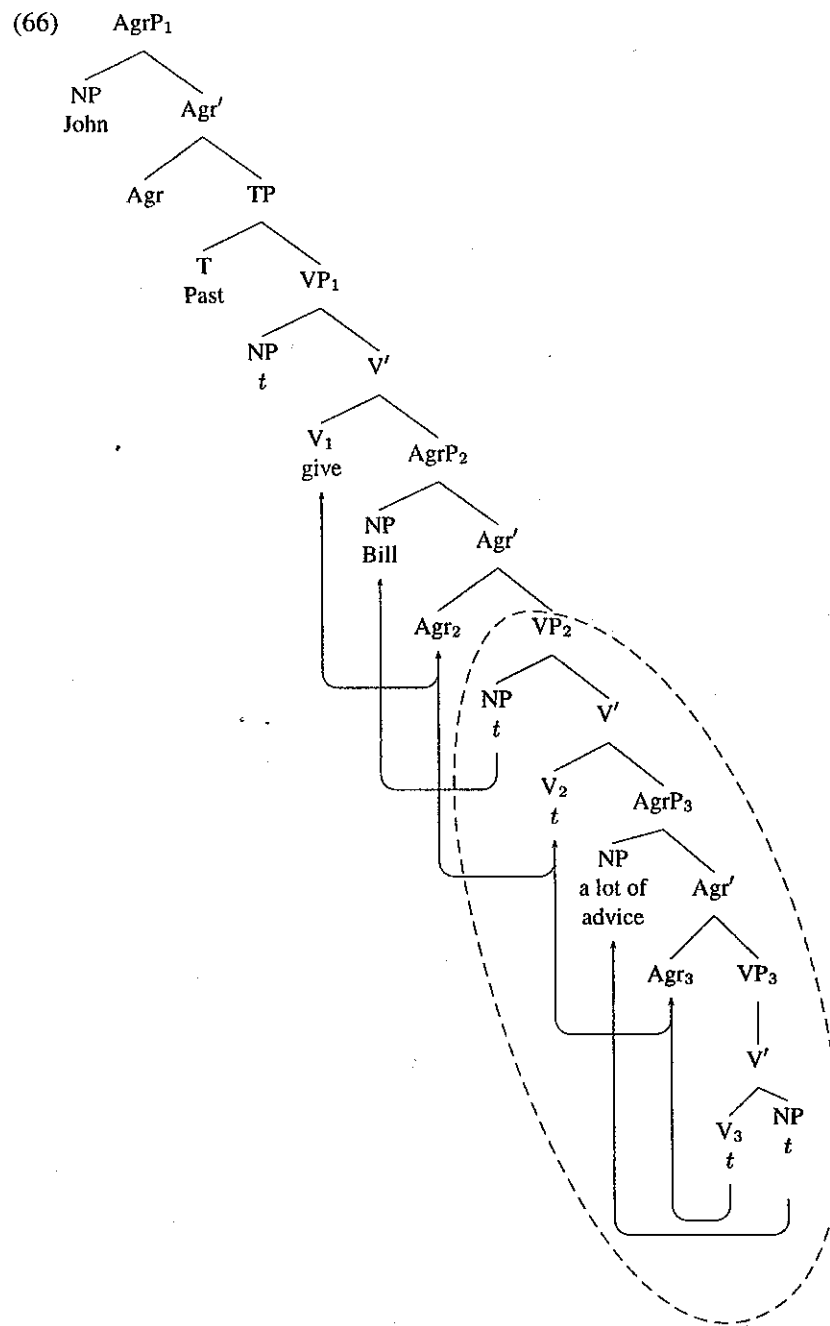
⁸See Park (1995) for an interesting suggestion.

⁹See also Lasnik (1993).



This time the licensing head, Past, is the same, but the syntactic connection is considerably more remote, with two maximal projections intervening. Yet deletion of the lower VP is reasonably acceptable. At this point, a comparison of this structure with that of the completely unacceptable (51), slightly modified here, is necessary.

(65) *Mary gave Susan a lot of advice, and John gave Bill a lot of advice.



Once again, two maximal projections intervene between Past and the target *VP*, *VP*₂. Further, the maximal projections appear to be the same as they were in (64), *VP* and *AgrP*. However, there is one difference: In the more-or-less acceptable (64) the intervening *V* head is empty, while in the unacceptable (66) the intervening *V* is the lexical verb *give*, which has raised from the lowest *VP*. I speculate that this is, in fact, the relevant difference, and I suggest that it is some version of relativized minimality that states this difference.

I tentatively offer two possible ways to instantiate this intuition. First, under the assumption that *Agr* lacks substantive content, in (64) the nearest potentially governing substantive head is the crucial governor Tense. In (66), on the other hand, the nearest potentially governing substantive head is the verb *give*, and that head is not (for whatever reason) an appropriate governor for *VP* ellipsis.

The second possibility, more speculative (but perhaps more in keeping with recent trends in syntactic theorizing), would put the relativized minimality requirement on the head licensing the ellipsis. Suppose the head licensing *VP* ellipsis does so by attracting (in the sense of Chomsky 1995b) a feature of the head of the *VP*. As a consequence of having "lost" this feature, the *VP* would now be *PF* defective unless it deleted.¹⁰ Chomsky argues that attraction seeks the nearest *c*-commanded item with a feature of the appropriate type. In standard simple *VP* ellipsis, that feature resides in the immediate complement of the licensing head. And in the ill-formed (65), attraction has "skipped" the *V* heading the complement of the licensing head and instead attracted a feature of the initial trace of that *V*, in violation of relativized minimality. Alternatively, a feature of the raised lexical *V* has been attracted, but that *V* has not been deleted, resulting in a *PF* crash. Finally, in the reasonably acceptable pseudogapping example (64), even though *hire* is geometrically rather remote from the licensing Tense, there is no nearer *V* with a feature for Tense to attract, so, in the spirit of relativized minimality, it can attract a structurally distant feature.

At this point, I return briefly to consideration of the Hebrew, Portuguese, and Irish examples in (58) to (60). Recall that in those examples, *VP* ellipsis was possible even though the head *V* had raised out of *VP*. This property of the constructions necessitated the rejection of the hypothesized ellipsis constraint (57) repeated here as (67).

(67) *XP* ellipsis is prohibited if *XP* has lost its head.

While a detailed examination of the ellipsis phenomena in the three languages mentioned would take us too far afield, the alternative account I offered as a replacement for (67) seems compatible with the facts. Assuming that, as in English, the licensing head for *VP* ellipsis is Tense, a suitable licensing configuration does exist, even though the *V* head of *VP* has raised. This is so since, unlike the situation in the ill-formed English (52), the *V* has raised to the Tense licenser, so that it does not *intervene* between licensing *T* and target *VP*.¹¹

¹⁰See Lasnik (in press) for the outlines of a theory of features and ellipsis with roughly this character.

¹¹With (57) rejected as a constraint on ellipsis, the sluicing effect in (56), repeated as (i), remains

6.5.2 Heavy NP Shift

I must now further explore a set of facts that provided some motivation for the analysis of pseudogapping I have presented, but which I have not actually explained so far. Recall that my analysis is based on Jayaseelan's fundamental insight, that pseudogapping is *VP* ellipsis with the remnant having moved out of the *VP*. However, I rejected Jayaseelan's specific implementation, in which the relevant movement rule is heavy *NP* shift. The basis for the rejection was the following set of data, which indicates that a possible pseudogapping remnant is not necessarily a possible target of *HNPS*, and conversely:

- (68) ?John gave Bill a lot of money, and Mary will ~~give~~ Susan ~~a lot of money~~.
- (69) *John gave *t* a lot of money [the fund for the preservation of *VOS* languages].
- (70) *John gave Bill a lot of money, and Mary will ~~give~~ Bill a lot of advice.
- (71) John gave Bill *t* yesterday [more money than he had ever seen].

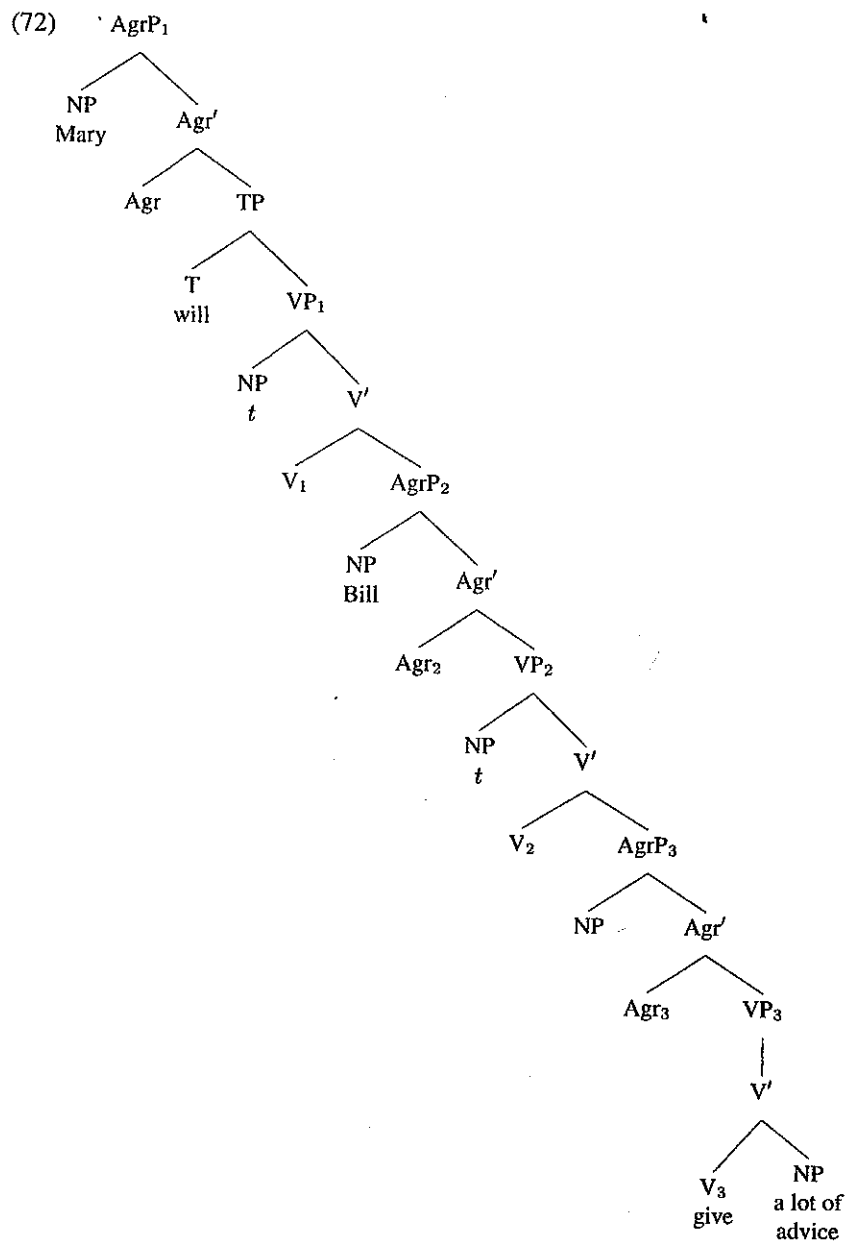
The raising to Spec of *Agr*_o analysis I offered straightforwardly accommodated this paradigm. But there is still an unanswered question: Even if, as I have argued, there is a process other than *HNPS* creating pseudogapping remnants, why can't *HNPS* also create them?¹² Given my extension of Koizumi's split-*VP* hypothesis, one structure that would potentially provide the source for *HNPS* and pseudogapping (*i.e.* deletion of the residual *VP*) as in (71) is (72).

unexplained.

- (i) Speaker A: Mary saw someone.
Speaker B: *Who did Mary see?

The proposal of Saito and Murasugi (adopted by Martin as well) about the specific way ellipsis is licensed might be relevant here. They suggest that the licensing head must agree with its specifier. In the sluicing example in (i), the licensing head is *C*. Now the content of *C* is the raised *Infl* (*T* and *Agr*), which obviously agrees with the subject, but does not obviously agree with the specifier of *CP*. I leave for future investigation the task of making this speculation more precise.

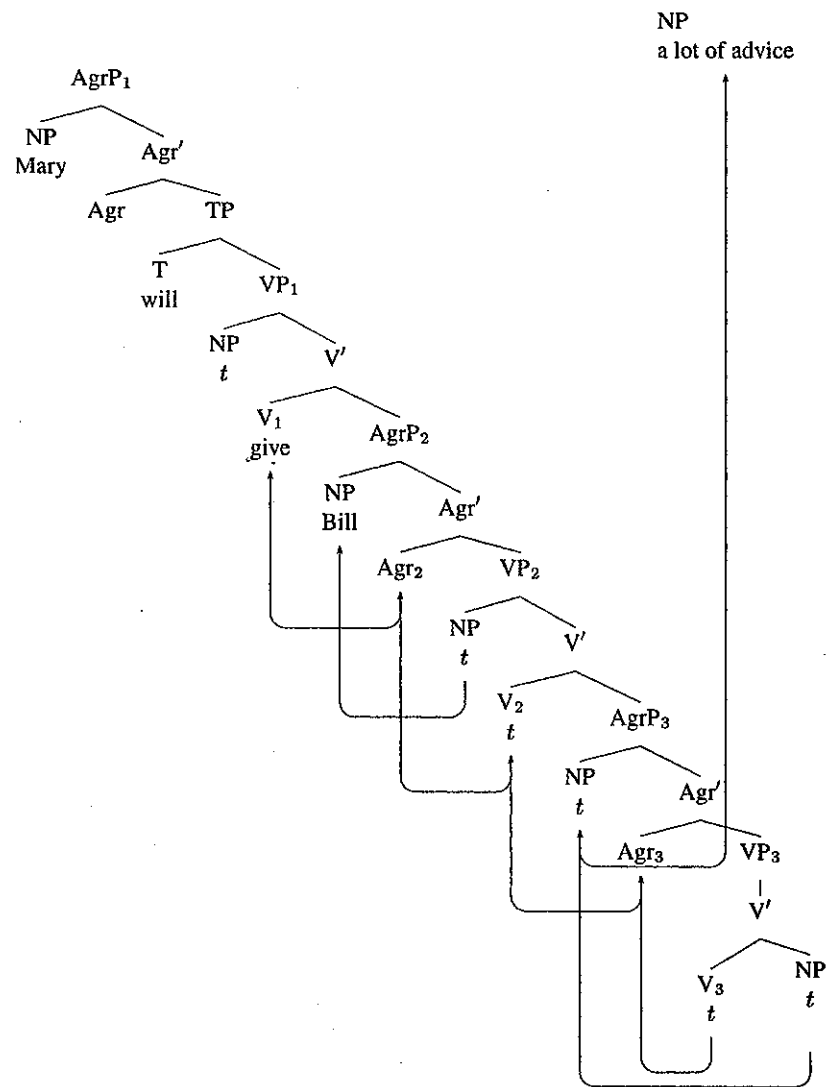
¹²There is, of course, another unanswered question as well: Why can't the first object in a double object construction undergo *HNPS*? I will not have anything to say about this here.



Suppose *a lot of advice* in (72) undergoes *HNPS* to some position higher than *Bill* and the residual *VP*₁ deletes (taking *Bill* with it). Note that on this derivation, the *EPP* feature of *Agr*₃ is not checked overtly, nor are two of the strong θ -features of *give* checked overtly, and we have seen that failure to check strong features overtly leads to considerable cumulative degradation even if the carrier of the feature is

deleted. But there is an alternative derivation that must still be considered, one in which all features are checked overtly. Starting again from (72), *a lot of advice* can raise to Spec of *Agr*₃, and *give* can raise to *V*₁ via *Agr*₃ and *Agr*₂. *A lot of advice* undergoes *HNPS* to a position outside *VP*₁, perhaps adjoined to *TP*, *VP*₁ itself, or *AgrP*₁; and finally, *VP*₁ deletes. So far, this appears to be a flawless derivation (illustrated in (73) for the unacceptable (70)).

(73)



I suspect that the violation in this derivation is independent of the considerations of this chapter, stemming, rather, from the (admittedly ill-understood) strong locality constraints on rightward movement.¹³ Assuming that the landing site is VP_1 , a closer VP , VP_2 has been skipped. Similarly, if $AgrP_1$ is the landing site, $AgrP_3$ and $AgrP_2$ have been skipped. Obviously, if VP and $AgrP$ are both suitable landing sites, numerous closer targets exist. Plausibly, this would render the required longer movement ungrammatical.¹⁴

One immediate consequence of this line of reasoning is that the shifted heavy NP in (71) is not very high, which entails that the adverb is also not very high. One workable position for the adverb is adjunct to the lowest VP (at least as one option). Given my analysis of pseudogapping, an example like the following provides support for this conjecture:

(74) John saw Bill yesterday and Mary did ~~see~~ Susan yesterday.

On my account, *Susan* has raised out of the lower of two VP s, and the residual VP , evidently including *yesterday*, has deleted. Notice that adverbs that, by their semantic character, would be assumed to be very high in the structure do not undergo "small" VP deletion (*i.e.*, pseudogapping), or even large VP deletion:

(75) *John saw Bill, fortunately, and Mary did ~~see~~ Susan, ~~fortunately~~.

(76) *John saw Bill, fortunately, and Mary did ~~see~~ Bill, ~~fortunately~~, (too).

Correspondingly, $HNPS$ around such high adverbs seems much less available than around lower ones:

(77) John saw yesterday his old friend from Philadelphia.

(78) ?*John saw fortunately his old friend from Philadelphia.

Thus, the strict locality on $HNPS$ posited to explain the inability of that rule to create pseudogapping remnants receives some independent support.

6.6 Antecedent Contained Deletion

I turn now to antecedent-contained deletion (ACD), a much discussed phenomenon often related implicitly to pseudogapping. Lappin (1992) makes such a proposal,¹⁵ and in this, Lappin follows the earliest investigator of ACD , Bouton (1970). Both these researchers suggest that in a sentence like (79), synonymous with (80), the

¹³See Baltin (1982) for important early discussion of such constraints.

¹⁴It is interesting to note that depending on the precise nature of the locality constraint on $HNPS$, Jayaseelan's analysis might be an option for simple instances of pseudogapping where the remnant would not have to move far to escape from the elided VP .

¹⁵Though, curiously enough, he claims that pseudogapping is otherwise impossible.

ellipsis site does not include the position from which the wh -movement involved in relativization took place.

(79) John saw everyone you did.

(80) John saw everyone you saw.

In the terms of the present paper, the wh -trace is a right remnant. This potentially resolves the notorious infinite regress that Bouton (followed by Sag 1976, May 1985, and Lappin 1992, among many others) originally saw in true instances of antecedent-contained pro forms. The initial difficulty of such constructions, ACD among them, is well-known. For example, in the derivation of (80), the antecedent of the missing VP seems to be a larger VP containing that very same missing VP :

(81) John [VP saw everyone [Op [you did [VP e]]]]
[VP saw everyone [Op [you did [VP e]]]]

Note that while the issue is most often discussed in terms of LF copying in the recent literature, the problem is symmetric between copying and deletion. Given the tentative conclusions of my discussion above, I will here talk in terms of deletion. Now, observe that if the wh -trace is a remnant, rather than part of the ellipsis site, the regress problem disappears:

(82) John [VP saw everyone [Op [you did [VP e]]]]
saw/see

This was the proposal of Lappin, and of Bouton before him.

Hornstein (1994) offers what appears to be a radically different account (even though Hornstein, like Lappin, is concerned to present an alternative to the classic QR account of May 1985). What Hornstein proposes is that raising to Spec of Agr_o is the process moving the object out of the VP , hence moving the null VP contained inside that NP out of its antecedent. Hornstein takes it for granted that this type of ellipsis involves LF copying, presumably based on the assumption that raising to Spec of Agr_o is covert. But, as noted above, if that raising is overt, PF deletion becomes a viable possibility.

Given the hypothesis that pseudogapping involves raising to Spec of Agr_o , Hornstein's proposal can now be seen as quite similar to Lappin's. And on the face of it, both proposals successfully address a problem, originally pointed out by Wyngaerd and Zwart (1991), for QR -based approaches. May (1985) argued that the process removing the null VP from its antecedent in ACD constructions is QR . His argument was based, in part, on contrasts like the following:

(83) Dulles suspected everyone Angleton did.

- (84) *Dulles suspected Philby, who Angleton did.

When the null *VP* is contained in a quantificational expression, as in (83), the result is acceptable, but when it is in the nonquantificational expression (84), it is not. This is precisely predicted if *QR* is the (only) available mechanism for resolving the regress inherent in these constructions. In (83), but not (84), the object will undergo *QR*, thus transporting the null *VP* out of its antecedent. However, Wyngaerd and Zwart show that examples indistinguishable from (84) in relevant respects are acceptable:

- (85) Dulles suspected Philby, who Angleton did not.
 (86) Dulles suspected Philby, who Angleton did as well.

They conclude, as does Hornstein later, that something other than *QR* must be at work, something that can affect nonquantificational expressions. For Hornstein, that something is raising to Spec of *Agr_o*, a possibility nicely consistent with the present analysis of pseudogapping. In addition, a further range of facts is at least roughly in accord. Recall that objects of reanalyzing prepositions constitute somewhat acceptable pseudogapping remnants. Correspondingly, they constitute somewhat acceptable carriers of *ACD* sites:

- (87) ?Dulles spoke to Philby, who Angleton did not.
 (88) ?Dulles spoke to Philby, who Angleton did as well.
 (89) ?Dulles talked about Philby, who Angleton did not.
 (90) ?Dulles talked about Philby, who Angleton did as well.
 (91) ??John took advantage of Bill, who Mary will also.

Recall also that objects of nonreanalyzing prepositions constitute very poor pseudogapping remnants. Significantly, they are also unacceptable as *ACD* site hosts:

- (92) *John stood near Bill, who Mary did not.
 (93) *John stood near Bill, who Mary did as well.

Even the double object asymmetry found in pseudogapping is approximately paralleled in the *ACD* constructions under consideration:

- (94) a. ?? John showed Bill, who Mary did as well, the new teacher.
 b. * John showed Bill the new teacher, who Mary did as well.

Thus, there is considerable support for the reduction of *ACD* to pseudogapping, and, again, for the reduction of the latter to the combination of raising to Spec of *Agr_o* and *VP* ellipsis. This is, in essence, in accord with the proposals of Lappin and Hornstein. However, on closer inspection, it becomes evident that the reduction is not complete. Hornstein, like Wyngaerd and Zwart, assumes that *ACD* is a unified process, in particular, that the appositive examples they present (in arguing against a *QR* account) have just the same analysis as the standard restrictive examples. But, as discussed by Lasnik (1993), this is not correct. In fact, none of the constraints on pseudogapping/(appositive) *ACD* seen so far hold of the restrictive type standardly discussed in the literature:

- (95) *John stood near Bill, who Mary did as well.
 (96) John stood near everyone Bill did.
 (97) *John showed Bill the new teacher, who Mary did as well.
 (98) John showed Bill everyone Mary did.

This state of affairs strongly supports the claim of Fiengo and May (1992) that while pseudogapping¹⁶ is the sole process responsible for appositive *ACD*, such is not the case for restrictive *ACD*.¹⁷ What the alternative source can be is a very complicated question, one that I will only be able to touch on here.

As mentioned earlier, the classic analysis of *ACD* (as in May 1985) relies on *QR* to move the carrier of the null *VP* out of the antecedent *VP*, under the assumption that ellipsis involves *LF* copying (rather than *PF* deletion).¹⁸ Following *QR*, the source for *LF* copying in (99) would be (100).

- (99) Dulles suspected everyone Angleton did.
 (100) [everyone Angleton did [*VP* *e*]] [*IP* Dulles [*VP* suspected *t*]].

In this theory, *QR* obviously moves full quantificational expressions (rather than, say, just the quantificational head). As Fiengo and May (1994, page 296) note, this entails that, at least under some circumstances, binding conditions must be satisfied at *S*-structure. In this regard, their argument precisely replicates one of Chomsky (1981, page 197). Chomsky observes that (101) exhibits a Condition *C* effect even though following *QR* its *LF* has no *A*-bound *R*-expression.

¹⁶Fiengo and May do not actually discuss pseudogapping in any detail, but nothing they say is inconsistent with the analysis presented here, as far as I can tell.

¹⁷Pseudogapping is, of course, an available source for the restrictive instances that parallel the appositives. But there must be an additional source as well.

¹⁸Given my argument that at least some instances of *VP* ellipsis (those involved in pseudogapping) are *PF* deletion, such an *LF* approach would demand that *VP* ellipsis can be deletion *or* copying, a possibly problematic consequence.

(101) He liked every book that John read.

Thus, Condition *C* must be satisfied (at least) at *S*-structure. Lasnik (1993) and Hornstein (1994) point out that under minimalist assumptions about the organization of the grammar, this conclusion is untenable, since there is no level of *S*-structure in that framework.¹⁹ Fox (1995) proposes a sort of minimalist version of *QR* wherein the rule applies only if it has to. What would make it necessary is resolution of a scope ambiguity, as in (102), or avoidance of an ellipsis regress, as in (99).

(102) Someone loves everyone.

In (101), on the other hand, nothing makes *QR* necessary, so it is inapplicable. The *LF* is therefore indistinguishable from the *S*-structure in relevant respects, so the Condition *C* violation is not remediated.

The one other syntactic approach I am familiar with is the extraposition analysis of Baltin (1987). On this analysis, the relative clause containing the missing *VP* has extraposed (sometimes vacuously) to a position outside the antecedent *VP*. Thus, when the antecedent is copied, regress can be avoided.²⁰ Larson and May (1990) point out several difficulties with such an analysis. First, the relative clauses in *ACD* constructions do not have the outward form of extraposed relatives. As is well known, *in situ* relatives allow three possibilities, an overt *wh*-form, an overt complementizer, or neither:

(103) who
I visited a man that John mentioned recently.
 ∅

With extraposed relatives, on the other hand, the third possibility is apparently excluded:

(104) a. who
 b. I visited a man recently that John mentioned.
 c. ?*∅

Larson and May allude to Stowell's (1981) proper government analysis of null complementizers to explain this contrast.²¹ Whatever the precise nature of the

¹⁹Hornstein's solution to the problem—that *ACD* (almost) always involves raising to Spec of *Agr_o*—was rejected above. The additional mechanism Hornstein proposes, base generating most *PP*s outside of the *VP* ellipsis site, is shown by Kennedy (1997) to be unworkable.

²⁰I am translating slightly, as Baltin's view of the *ACD* problem is somewhat different from the one adopted here, essentially May's.

²¹Larson and May attribute to Stowell the claim that the trace of a deleted complementizer must be properly governed. In fact, Stowell does not claim that deletion leaves a trace at all. Rather, for him, it is a base-generated null complementizer that must be properly governed.

constraint, under Baltin's account it would be predicted that the null form is excluded from *ACD* constructions. In direct conflict with this prediction, the null form is freely allowed. Many of the *ACD* examples cited thus far display the null form. Example (99), repeated as (105), is representative.²²

(105) Dulles suspected everyone Angleton did.

It should be noted, though, that the null complementizer constraint is not ironclad. The following example, of a type pointed out to me by Mark Baltin, possibly involves extraposition, yet it is quite acceptable:

(106) I threw something out I had no further use for.

Even more similar to (104c) is (107), but the latter is considerably better.

(107) ?I visited a man yesterday John had told me about.

The null complementizer phenomenon is, as Larson and May argue, potentially of great relevance to the issue at hand, but it clearly demands further investigation.

In addition to the null complementizer paradigm, Larson and May point out a further difficulty for an extraposition account of *ACD*. Consider the *LF* structure of (96) following extraposition:²³

(108) John [*VP* [*VP* stood near everyone] [*CP* *Op* [Bill did [*VP* e]]]]].

LF copying of the *VP* (which Larson and May call reconstruction), results in a structure that appears to be completely incorrect, lacking a variable to be bound by *Op*, the relative operator:

(109) John [*VP* [*VP* stood near everyone] [*CP* *Op* [Bill (did) [*VP* stood near everyone]]]]].

²²Curiously, in *ACD* constructions, it is the overt operator that is degraded, as illustrated in (i):

(i) Dulles suspected everyone ??who
 that Angleton did.
 ∅

²³Larson and May actually used an example involving a direct object:

(i) John saw everyone that you did.

I use a slightly more complicated example to avoid the possibility, discussed extensively above, of raising to Spec of *Agr_o*.

Thus, *QR* is needed regardless, they argue. With *everyone* in (109) raised, the variable it leaves behind is correctly copied as a variable:

- (110) everyone [_{IP} John [_{VP} [_{VP} stood near *t*] [_{CP} *Op* [Bill (did) [_{VP} stood near *t*]]]]].

Note, though, that this kind of *QR* would not run afoul of the minimalist binding theory problem, since here, just a simple quantifier is raised. There is no pied-piping. If even in *ACD* constructions *QR* can be limited in this way, one of the major difficulties disappears.

There is one other approach to Larson and May's missing variable problem that might also be worth considering. As Larson and May observe, what is needed in the elided *VP* is a trace. But this leaves open exactly what a trace is. Chomsky (1993) provides discussion bearing on this question. Considering a variety of factors, and in particular reconstruction effects,²⁴ Chomsky suggests that a trace is initially a full copy of the moved item. Chomsky shows how this provides the basis for an account of the grammaticality of (111):

- (111) Mary wondered which pictures of himself Bill saw.

The structure of (111) following *wh*-movement and prior to other operations is as in (112):

- (112) Mary wondered [_{wh}- which picture of himself] [Bill saw [_{wh}- which picture of himself]].

Himself is assigned an appropriate antecedent by virtue of its position in the trace. Now note that the same reconstruction effects show up in relative clauses:

- (113) Mary mentioned the pictures of himself that Bill saw.

Thus, the trace in this instance also is presumably a copy of the head:²⁵

- (114) Mary mentioned the pictures of himself that Bill saw the pictures of himself.

But given this analysis, Larson and May's example (109) is not, after all, incorrect: The trace is precisely a copy of the head, at the relevant point in the derivation.

²⁴In the conventional usage of the term, rather than that of Larson and May.

²⁵I leave open the question of whether the null operator is also a copy of the head. Note, in passing, that the reconstruction effects at issue show up with an *overt* relative operator as well:

(i) Mary mentioned the pictures of himself which Bill saw.

I close this investigation by observing that there is one new problem with the extraposition analysis. Recall that the second object in a double object construction is a fine restrictive *ACD* host, as in (98), repeated as (115).

- (115) John showed Bill everyone Mary did.

The missing *VP* is [show Bill *t*]. Thus, the relative clause must extrapose to a position quite high in the structure. But earlier I showed that such long distance extraposition is *not* possible in the case of *HNPS*. If the latter effect reflects a general constraint on rightward movement, then Baltin's extraposition account is excluded on those grounds. A more definitive conclusion on this matter awaits a better understanding of movement constraints of this type.

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7

Gapping, PF Merger, and Patterns of Partial Agreement

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7.1 Introduction

Two types of partial agreement arise in the context of subject-verb agreement in Standard Arabic (*SA*), Lebanese Arabic (*LA*) and Moroccan Arabic (*MA*). The first type of partial agreement exclusive to *SA* is characterized by the fact that in the context of postverbal simple plural *NPs* the verb agrees with the subject in gender and person only. The second type of partial agreement is present in all three varieties of Arabic and is characterized by the fact that, when the postverbal subject is a conjoined *NP*, the verb may agree with the first conjunct only.

In this chapter, we discuss two major issues that arise in the context of these types of partial agreement. The first one concerns the interaction of partial agreement and interpretation. In *SA*, partial agreement does not seem to have any effect on interpretation. In particular, elements that usually require a plural subject are allowed in the *VS* order in *SA*. In *LA* and *MA*, on the other hand, elements that require a plural antecedent cannot occur in the context of partial agreement. We suggest that the difference between *SA*, on one hand, and *LA* and *MA* on the other, is to be traced back to the existence of a postsyntactic (*PF*) process in *SA* incorporating the verb and the postverbal subject. The second issue concerns the context in which partial agreement occurs: In *LA*, *MA*, and *SA*, first conjunct agreement is only available in the *VS* order. We show that a gapping (biclausal) structure for first conjunct agreement accounts for the limited distribution of partial agreement. Lack of first conjunct agreement in the *SV* order is traced back to the lack of backward gapping in Arabic.