

# In Search of the English Middle Field

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# 1

## Bridging the Gap

Gapping is the name that Ross (1970) gives to the process illustrated below.

- (1) a. Some ate natto and others rice.
- b. Some ate the natto hungrily and others timidly.
- c. Some talk about problems openly and others cautiously.

Gapping allows a verb, perhaps in combination with other material, to go unpronounced if its content can be recovered from the other conjunct. Let's call single unpronounced verbs, as in (1a), "single Gaps," and those which involve additional material, as in (1b,c), "complex Gaps."

A curious property of complex Gaps is that they pitch the standard view of constituent structure against the equally standard hypothesis that syntactic processes respect constituency. This conflict can be seen in examples like (2).

- (2) a. Some gave albums to their spouses, and others ~~gave~~ tapes to ~~their spouses~~.
- b. Some went out to buy beer, and others ~~went out to buy~~ fried chicken.

(Gapped material is placed in strike-outs.) Either the view that constituency is always obeyed by syntactic operations or that the elided strings in (2) are non-constituents must go. The current literature on Gapping treats the dilemma only obliquely. The best developed accounts abandon the requirement that syntactic processes respect constituency, but make use of frameworks that look increasingly unlikely. On the other hand, many modern references to the construction merely assume that Gapping respects constituency and use its perversity to revise

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the phrase structure of sentences accordingly. This chapter defends the second direction, and takes a few short steps towards the necessary revisions.

The conclusion that Gapping affects constituents comes by way of answering the more fundamental question of what the gap in Gapping is. The answer offered here is that it is the same kind of gap that movement operations leave. In this case, it is created by movement of the terms that appear to be the antecedents for the Gap in the preceding conjunct. To the extent, then, that the gaps left by movement are constituents, Gaps are too. Section 3 offers the reasons for this conclusion, and builds on section 2's chronicle of problems for a tempting alternative account – one that would assimilate Gapping to the kind of ellipsis found in “VP Deletion,” and the like. Section 1 reviews some of these accounts.

Of the many properties of Gapping left unexamined, there is one whose effects will be apparent throughout. This is that the material left in the conjunct with the Gap, let us call these the “remnants,” are in a contrastive focus relation to parallel terms in the other conjunct, let's call these their “correlates.” This is reflected in the intonation characteristic of Gapping, which requires that both remnants and correlates be stressed (cf. Sag (1980, p. 192ff)). This fact, whatever its source, places significant limits on the construction. It may be what enforces a certain parallelism on the conjuncts that Gapping relates, illustrated by the oddness of examples like (3).

- (3) a. \* Some talked to Mittie and others ~~talked~~ about Sam.  
b. \* Some remembered stories about JOHN, and others ~~remembered~~ BILL.  
c. \* Some explained that Betsy understands GENETICS, and others ~~explained~~ DNA.

See Sag (1980 Chapter 3) and Pesetsky (1982 Chapter 5 sec. 5.2) for possible accounts. We shall only consider cases that meet this requirement in what follows.

Further, as Kuno (1976) argues, the remnants and the terms they are in a contrastive focus relationship with must both represent new information. This indirectly affects how many remnants are possible because sentences strain when they introduce more than two new terms. Thus, while a typical Gapping construction has just two remnants, usually the subject and complement of the clause (as in (1a) or (2)), it is possible to find more when the situation can host additional new information, as when (4b) is used to answer (4a).

- (4) a. Who gave what to whom?  
b. Nishi gave TONGS to MELISSA, Will ~~gave~~ ORCHIDS to CARRIE and Vivek ~~gave~~ MARXIST PAMPHLETS to STEPHANIE.

In what follows, I will assume that this factor is what places the upper bound on remnants

There is a lower bound as well. The Gap cannot include an entire clause — there must be at least one remnant. Sentences such as *Some ate natto and* are completely ungrammatical. Let us assume that this too is a consequence of the contrastive relationship that Gapping invokes. It is typical of the literature, however, to require of Gapping that at least two remnants survive. Cases like (5) are ungrammatical.

- (5) a. \* Sarah left and Betsy.
- b. \* Sarah ate them and Betsy.
- c. \* Sarah gave them to friends and Betsy.

But, as many authors note, examples such as these improve if they are placed in the appropriate context, or given the help of *too*.

- (6) a. Who left?
- b. Sarah left, and Betsy too.
- (7) a. Who ate them?
- b. Sarah ate them, and Betsy too.
- (8) Mittie ate natto, but not Sam.

As in Reinhart (1993) and Rooth (1992), I will include these in the mechanism that derives Gaps; see section 1.4.2.

### 1.1 Is Gapping ellipsis?

I will not engage here the issue of whether the interpretations that sentences with Gaps get is a consequence of “silent material” in the place of the Gap. I shall simply take this for granted. Much of what we will see in this chapter supports this decision, and certainly it constitutes the simplest syntax-semantics mapping.

What I shall engage is instead whether the means by which the Gapped material goes silent is the same as that which is responsible for “VP Ellipsis,” “Sluicing,” “ $\bar{N}$  Deletion” or other such processes. Despite certain interesting differences among these constructions, I will take the process responsible for them to be the same; Let’s call this process “ellipsis,” and, in what follows I will indicate it with “ $\Delta$ .” What is at issue here, then, is whether Gapping is a result of ellipsis.

There are compelling similarities between VP Ellipsis and Gapping which urge a collapse of the two. Like Gapping, VP Ellipsis is an operation that removes a string that contains a verb under identity with some previously occurring string. VP Ellipsis, like Gapping, can either strand a portion of the VP it affects, or take all of it, as in (9).

- (9) a. Gary talked to Betsy yesterday, and Mittie did  $\Delta$  today.
- b. Gary talked to Betsy yesterday, and Mittie did  $\Delta$  too.

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It is true that there are superficial differences between VP Ellipsis and Gapping; an elided VP must follow a finite auxiliary (or similar term), and a Gap needn't. The resemblances suggest a family nonetheless, and many of the best developed accounts of Gapping have attempted a reduction of the two.

Gapping also shares with VP Ellipsis the ability to affect discontinuous strings. Parallel to the cases of VP Ellipsis in (10) are those of Gapping in (11).<sup>1</sup>

- (10) a. Because someone had given albums to the girls, we will  $\Delta$  tapes.  
b. Because someone had put plants in the office, we will  $\Delta$  art.  
c. Because someone had worded the letters carefully we will  $\Delta$  the memos.  
d. Because someone had painted the barns red, we will  $\Delta$  the houses.  
e. Because someone had rolled the dough flat, we will  $\Delta$  the butter.  
f. because *Time* had believed Agnew to be guilty, *Newsweek* will  $\Delta$  Nixon.  
g. Because Arizona has elected Goldwater senator, Pennsylvania will  $\Delta$  Schweiker.  
h. Because Niels had only proven the theorem wrong, Albert will  $\Delta$  the entire framework.
- (11) a. Some gave albums to their spouse, and others ~~gave tapes to their spouses~~.  
b. Some put plants in their office and others ~~put art in their office~~.  
c. John worded the letter carefully, and mary ~~worded~~ the memo ~~carefully~~  
d. Max paints barns red and Bill ~~paints~~ houses ~~red~~.  
e. Betsy rolled the dough flat, and Sam ~~rolled~~ the butter ~~flat~~.  
f. *Time* believes Agnew to have been guilty, and *Newsweek* ~~believes~~ Nixon ~~to have been guilty~~.  
g. Arizona elected Goldwater senator, and Pennsylvania ~~elected~~ Schweiker ~~senator~~.  
h. Niels proved a theorem wrong, and Albert ~~proved~~ an entire frame-work ~~wrong~~.

(based on Larson 1990, p. 628 and Jackendoff 1971, p. 24)

Gapping appears then to fall in with VP Ellipsis in what we called Pesetsky's paradox in the previous chapter. VP Ellipsis and Gapping both find constituents that VP Fronting and *do so* anaphora don't. They violate the otherwise apparent

<sup>1</sup> I follow Levin (1978), Sag (1980), Jayaseelan (1990) and Lasnik (1999) in assimilating these cases of "Pseudo-gapping" to VP Ellipsis; but there remain some problems for this. See Levin and Rappaport (1986, 2.9.2).

law that maps constituency onto continuous strings. Indeed, even the puzzlingly deep instances of VP Ellipsis we encountered in the previous chapter have correspondents in Gaps. Compare (12) with (13).

- (12) a. John won't try to buy fried chicken, but he will  $\Delta$  beer.  
 b. ?? John will be glad to see Jane, but he won't  $\Delta$  Martha.
- (13) a. John tried to buy beer, and Bill ~~tried to buy~~ fried chicken.  
 b. John was glad to see Jane, and Bill ~~was glad to see~~ Martha.

(based on Neijt 1979, (52): 131)

We might entertain the speculation that VP Ellipsis and Gapping make use of similar mechanisms to find these discontinuous constituents.

(It will become useful to keep the discontinuous elisions in (11) distinct from those in (13). I will call the strings elided in (11), "local Gaps," and those in (13) "long-distance Gaps.")

So one thing that could be explained if VP Ellipsis and Gapping were equated is why they both fall on the same side of Pesetsky's paradox. All that needs doing is to find a way of letting VP Ellipsis widen its grip so that it includes the finite auxiliary. An account of Gapping, then, could consist simply in identifying the method by which this widening is achieved.

This approach to Gapping has a venerable history. John Ross resolved the anomalous picture of constituency that VP Ellipsis and Gapping give with the proposal that these processes elide the "context variables" found in the structural descriptions of 1960's era transformations. These variables, it will be recalled, range over strings of terminals irrespective of their constituency, so they make a natural candidate for Gapping's target. VP Ellipsis and Gapping could then both be seen as the same operation, differing only in the length of their targets. This approach to the problem dominates the older literature on Gapping. Its sponsors include Tai (1969), Koutsoudas (1971), Hankamer (1973, 1979), Stillings (1975), Langendoen (1976), Oir-souw (1987), and Neijt (1979).

An interesting piece of evidence in favor of this proposal, at least with respect to Gapping, is that the strings which Gapping appears able to affect are constrained in ways similar to the constraints Ross argued hold of context variables. In a Rossian framework, the distance that long-distance operations, like Wh-Movement, are able to span is limited by constraints which hold of the variable that separates the target and landing site of these operations. Hankamer (1979, pp. 20-21), Kuno (1976, note 29, p. 317) and especially Neijt (1979, Chapter 3) argue that long distance Gapping is blocked in cases where the elided string would violate one of these constraints. Neijt makes the clearest case for this position, using the catalogue of islands in Ross

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(1967) as a guide, and so I will base my discussion on her.<sup>2</sup> She shows that Gapping respects the *Wh*-Island constraint, as (14) demonstrates.<sup>3</sup>

(14) a. \* John wondered what to cook today and Peter ~~wondered what to cook~~ tomorrow.

b. \* John asked which candidates to interview this morning and Peter ~~asked which candidates to interview~~ this afternoon.

(*ibid*, (73):138 )

Similarly, Gapping appears to obey the Adjunct condition (cf. (15)), the Complex Noun Phrase Constraint (cf. (16)) and the Subject Condition (cf. (17)).

(15) a. \* John must be a fool to have married Jane, and Bill ~~must be a fool to have married~~ Martha.

b. \* Tom went to Florida to learn to play tennis and Bill ~~went to Florida to learn to play~~ squash.

(16) a. \* I read out the order to fix tortillas, and Mary ~~read out the order to fix~~ beans.

b. \* I reviewed the decision to fire the line-workers, and Mary ~~reviewed the decision to fire~~ the inspectors.

(17) a. \* Stories about Frankenstein terrified John and ~~stories~~ about Dracula ~~terrified~~ Peter.

b. \* Books about linguistics were reviewed by Bill and ~~books~~ about psychology ~~were reviewed~~ by Peter.

(Neijt 1979, (53):132;(66):136)

If Gapping deletes a context variable, then these putative constraints on what a context variable can be will correctly capture the ungrammaticality of such cases.

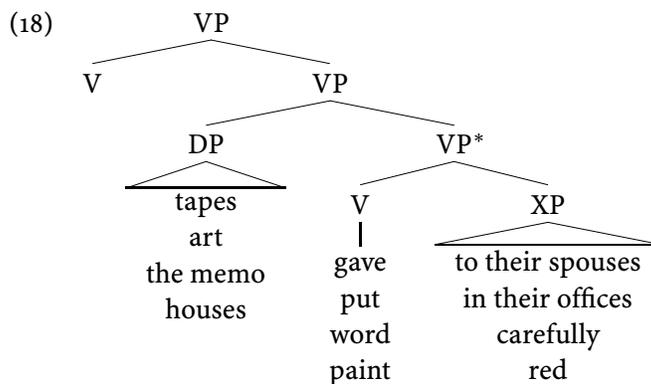
A more modern method of resolving the constituency puzzles, and one that is a direct descendant of Ross's, relies on a derivational model of syntactic representations, one that gives the same surface string a multiplicity of parses, or levels of representation. Imagine, for instance, that the constituency relations that hold of one level of representation are targeted by VP Ellipsis, while those at another level of representation provide the targets for Gapping. This is the strategy that

2 Sag (1980, chapter 3)'s position that the Relativized A-over-A condition operates in Gapping, like the "Major Constituent Constraint" in Hankamer (1979) might derive from the thesis that Gapping affects constituents; see Wyngaerd (1993) for discussion.

3 Interestingly, Ross (1967) argues that the *Wh*-Island does not constrain context variables; we return to the reasons shortly.

Richard Larson endorses.<sup>4</sup> He suggests that the VP Shell model he proposes to capture the scope facts reviewed in Chapter 1 will also provide the constituents that have Gapped in (11). As we've seen, this won't alone be adequate to resolve the local and long-distance environments, but let's see where such a strategy might lead.

Recall that Larson's proposal is to build VPs from a series of embedded Shells, one for each of the phrases that the verb combines with (roughly). The phrases that the verb combines with are arranged according to a hierarchy that puts the ones more like "direct objects" in the Specifiers of higher VPs, and the less direct object-like phrases in the Specifiers or complement positions of lower VPs.<sup>5</sup> He accounts for the fact that the verb precedes all its complements with the suggestion that the verb occupies the highest  $V^0$  in the surface representation, perhaps by moving from a lower one. Applying this scheme to the examples in (11) results in an underlying structure with the requisite constituent structure; see (18). If we allow Gapping to



elide VP\* before the verb has moved out of this phrase, then the examples in (11a-e) can be generated.

The cases in (11f-h) can be given a similar treatment, though here we encounter two possible ways to implement Larson's program. On one, the Gapped verb and predicate together form a "complex predicate," which jointly assign the appropriate  $\theta$ -role to the object. This would give to (11f-h) an underlying structure very like (18); something like (19) on the next page, perhaps. This approach to the "small clause" and "Exceptional Case marking" constructions has a long history, stretching back to ?. Wyngærd (1993) explicitly imports it to use on cases like (11f-h).

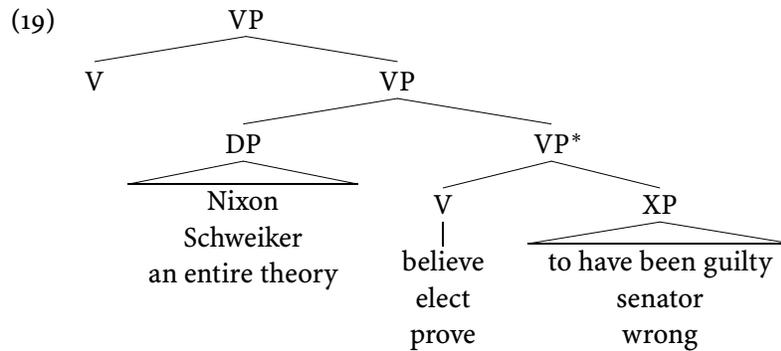
An alternative is to see the "object" stranded by Gapping in (11f-h) as having no thematic connection to the Gapped verb, but instead serving solely as the subject of

<sup>4</sup> See Larson (1988) and Larson and May (1990).

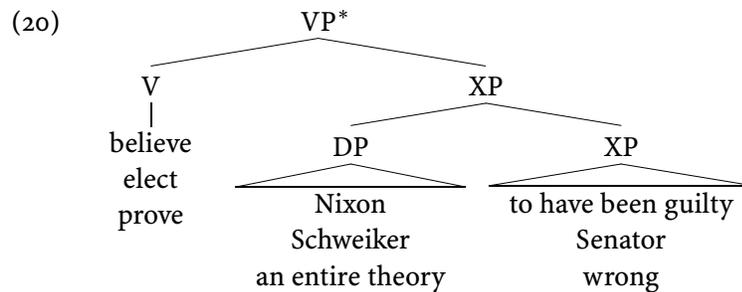
<sup>5</sup> Larson expresses this in terms of a hierarchy of  $\theta$ -roles.

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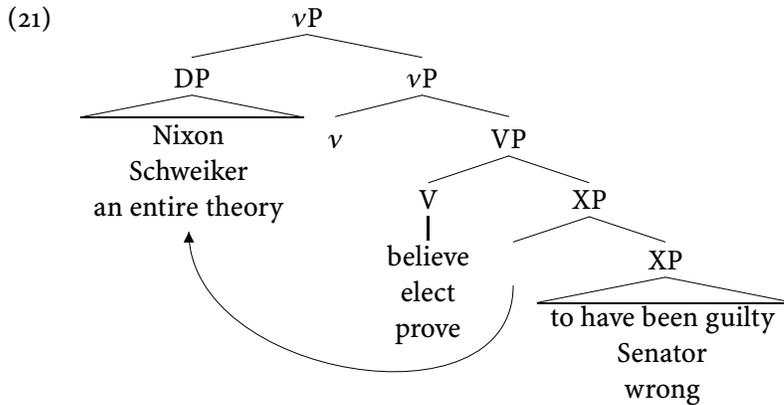


the lower predicate. This would lead to an underlying representation like (20) below. Of course (20) does not provide an appropriate source for the Gaps in (11f-h),



as there is no constituent that includes the verb and lower predicate but excludes DP. So under this conception of these constructions, we should abandon the view that Gapping solely targets the constituents defined underlyingly, and suppose instead that there is a representation where the DP has moved to a higher position, perhaps for reasons of Case, that provides the necessary constituent. There are currently too many ways of expressing this option; let us adopt for convenience the position that the representation where this situation obtains is the surface one, and that the DP has moved into a structurally Case-marked position — let's use the label “vP” for the phrase that assigns accusative Case. On this view, then, (20) yields the representation in (21) on the next page. Gapping would then apply to this representation — the one that obtains before the verb has moved but after the object has — and elide VP. This is the second method of applying Larson's suggestion to the cases in (11f-h).

On Larson's method of invoking this strategy, then, Gapping targets constituents which reflect the linear and scope relations of VP constituents underlyingly, with



the exception of the verb's position. That is, it elides constituents which exist before the verb has moved, but are otherwise reflected in the surface forms of the sentences involved.

This is not sufficiently general, however, even in just the case of local Gaps. It predicts that a verb cannot Gap with its direct object stranding the indirect object, since there is no underlying structure on a Larsonian model that provides this constituency. (There is no constituent in (18) which consists of the verb and direct object but not the rest of the VP.) But this is possible, as (22) indicates.<sup>6</sup>

- (22)
- a. Some give money to charities, and others ~~give money~~ to politicians.
  - b. some put streamers on the tree, and others ~~put streamers~~ on the doorway.
  - c. Some word their letters carefully, and others ~~word their letters~~ tactlessly.
  - d. Some painted the barn red and others ~~painted the barn~~ pink.
  - e. Some rolled the dough long and others ~~rolled the dough~~ wide.

<sup>6</sup> Indeed, Larson (1990) presents the exemplars of this scenario in (1) as ungrammatical.

- (1)
- a. \* John gave a record to Mary, and Bill ~~gave a record~~ to Alice.
  - b. \* Alec put a dollar in the machine and Max ~~put a dollar~~ in the collection plate.
  - c. \* John worded the letter carefully and Mary ~~worded the letter~~ tactlessly.
  - d. \* Max painted the barn red, and Bill ~~painted the barn~~ pink.
  - e. \* Eunice hammered the metal flat, and Gertrude ~~hammered the metal~~ smooth.

(Larson 1990, (64): 628)

I have found speakers that disfavor (1d) and (1e) relative to the others, but notice that there is a distracting ambiguity in these examples. Audiences I have encountered generally accept (1). The cases in (22) are even better.

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- f. Some elected the schmucks Senators and others ~~elected the schmucks~~ Congressmen.

The same problem plagues a strategy which uses VP Shells alone to characterize the constituents which VP Ellipsis affects. VP Ellipsis is also able to target the constituents in (22), with the interesting exception of (22f):

- (23) a. Because someone had given money to politicians, we did  $\Delta$  to charities.  
b. Because someone had put streamers on the tree, we did  $\Delta$  on the doorway.  
c. Because someone had worded the letters carefully, we will  $\Delta$  the memos.  
d. Because someone had rolled the dough long, we will  $\Delta$  wide.  
e. \* Because someone has elected schmucks Senators, we will  $\Delta$  Congressmen.

These examples show that the underlying structures which Larsonian shells provide are not sufficient to characterize the constituents which Gapping or VP Ellipsis targets.<sup>7</sup> Instead, an account that makes use of different levels of representation to resolve the differences between VP Ellipsis and Gapping must employ more than just the underlying structures that a Larsonian framework provides. Following the account of the VP Ellipsis cases in Jayaseelan (1990) and Lasnik (1995), we might imagine that the constituents which Gapping targets are those which movement creates. The proposals in Sag (1980), Pesetsky (1982) and Jayaseelan (1990) have this property.<sup>8</sup> Setting aside particulars, they suggest that Gapping elides a constituent from which the remnant has moved. The cases in (22), for example, could be the result of VP Ellipsis, appropriately modified to include the auxiliary, operating after the stranded PPs or secondary predicates have moved out of the VP. Similarly, the long-distance Gaps in (13) could be the product of VP Ellipsis applying to the root VP after the embedded object has moved into the root clause and out of the elided VP. Differences between VP Ellipsis and Gapping, like that between (22d) and (23d), might then be credited to differences in how the remnant moves.

There are two desirable consequences of this approach. First, as Jayaseelan points out, allowing the constituents that Gap to be formed by movement predicts that the range of Gappable constituents will correlate with the range of movement operations allowed. In languages where there is a greater range of movable terms we

<sup>7</sup> This remains true even if the positions that Larson assigns to direct and indirect objects turn out to be reversed, as Takano (1996) argues, for then the Gappability of the indirect objects in (11a-e) will become mysterious.

<sup>8</sup> Although Pesetsky's account assimilates Gapping to Sluicing.

should expect to find a greater range of Gappable constituents. Jayaseelan argues that this is in fact the case; he suggests that languages which permit Scrambling have a wider inventory of Gappable terms than do languages which don't permit Scrambling.

The second desirable consequence is that it provides a way of capturing the island effects that arise in long-distance Gaps — a point Pesetsky (1982, Chapter 5, section 2.5.2) makes. Long distance Gapping can be seen as involving long-distance movement of the remnant. In cases such as (24a), for example, the Gap would be the verbal projection consisting of verb+clause, and the remnant would have moved out of that projection, as sketched in (24b).

- (24) a. Some tried to drink pernod and others ~~tried to drink~~ buttermilk.  
 b. ...[others buttermilk [<sub>VP</sub> ~~tried~~ [<sub>CP</sub> ~~PRO to drink~~ ]]].
- 

To the extent that movement of the remnant is subject to Bounding Theory, the distance that the Gap may traverse will be likewise limited.

The movement illustrated in (24) is very like the long-distance Scrambling seen in German and Dutch. Long-distance Scrambling in these languages moves certain kinds of terms out of infinitival clauses in contexts sometimes described as involving “Verb Raising,” or “Restructuring.” The “Verb Raising” phenomena is home to quite a variety of mysteries, and nothing in this chapter will change that. Still, it will be instructive to take a brief look at this construction.

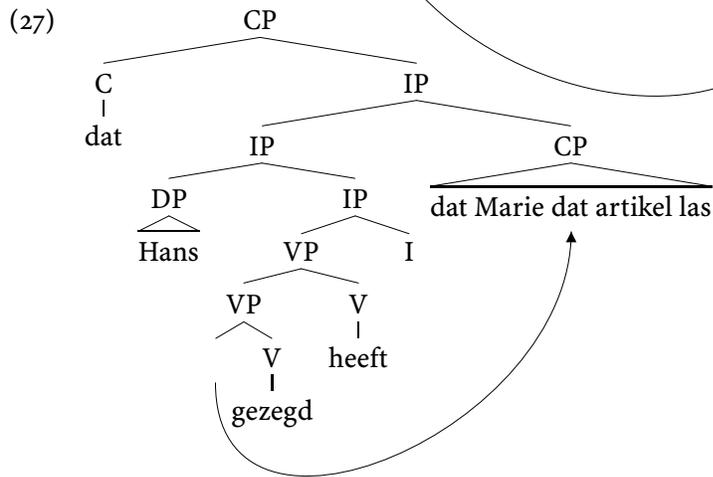
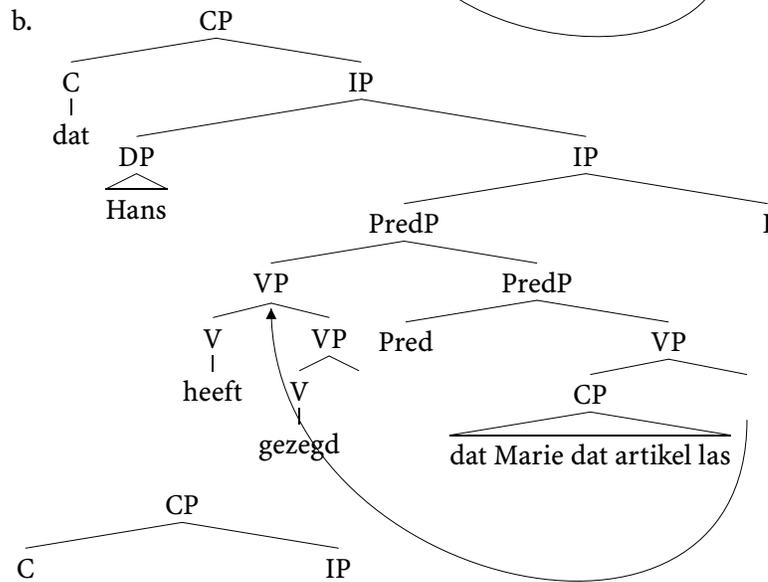
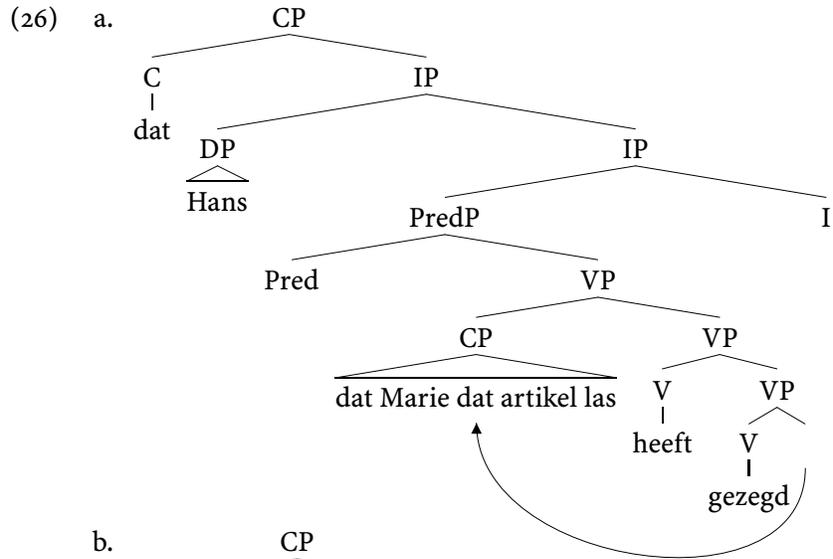
How Verb Raising and long-distance Scrambling are described depends on how the “verb final” properties of German and Dutch are characterized, and, unfortunately, this is presently the subject of some controversy. For concreteness, I will sketch an approach to the syntax of these languages that fits particularly well with the conclusions of this book, though, so far as I can determine, nothing of substance for the points here will hang on this. This approach is the one pioneered in Zwart (1993, 1997). Its central feature is the claim that material which appears following the verbal cluster at the end of a clause — the so-called “Endfield” — has not extraposed rightward into this position but is instead stranded there by material that has moved leftward. That is, a sentence like (25) has a derivation like that in (26), not (27).

- (25) ...dat Hans gezegd heeft dat Marie dat artikel las.  
 ...that Hans said has that Mary the article read  
 ‘... that John said that Mary read the article.’

There are two cases of long-distance Scrambling to consider. They are most easily distinguished in situations where the verbs involved are embedded under an auxiliary. In one, the infinitive that undergoes restructuring is the complement to a

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participle. Here we get a different range of outcomes depending on the class of verb that selects the infinitive. For one class, which includes *proberen* ('try'), we find, not surprisingly, that the infinitival clause can follow the participle auxiliary complex:

- (28) a. ...dat Jan heeft geprobeerd [Marie te kussen].  
 ...that John has tried [Mary to kiss].  
 b. ...dat Jan geprobeerd heeft [Marie te kussen].  
 ...that John tried has [Mary to kiss]

'...that John has tried to kiss Mary.'

(from den Besten and Rutten (1989))

In these contexts it is also possible for the object to appear to the left of *heeft*, as in:

- (29) a. ...dat Jan Marie heeft geprobeerd [ te kussen].  
 ...that John Mary has tried [ to kiss].  
 ↑  
 b. ...dat Jan Marie geprobeerd heeft [ te kussen].  
 ...that John Mary tried has [ to kiss].  
 ↑

'...that John tried to kiss Mary.'

(Note that in both (28) and (29), the participle may appear on either side of the auxiliary.) den Besten and Rutten (1989) argue that in these cases the object, here *Marie*, has scrambled out of the infinitival clause into a position in the matrix clause as indicated. One of their arguments is that this will account for the paradigm in (30) which can be related to the parallel paradigm in remnant topicalization, shown in (31).

- (30) a. ...dat Jan haar besloten heeft [ op te bellen].  
 ...that John her decided has [ up to call].  
 ↑  
 b. \*...dat Jan haar op besloten heeft [ te bellen].  
 ...that John her up decided has [ to call].  
 ↑  
 c. \*...dat zij niemand aardig besloten heeft [ te vinden].  
 ...that she nobody nice decided has [ to find].  
 ↑

(from den Besten & Rutten 1989)

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- (31) a. [t lezen]<sub>1</sub> kan hij *dat artikel* natuurlijk niet t<sub>1</sub>  
 [t read]<sub>1</sub> can he the article naturally not t<sub>1</sub>  
 ‘Read the article, he naturally can’t.’
- b. \* [t gestann]<sub>1</sub> is Jan op t<sub>1</sub>  
 [t got]<sub>1</sub> is John up t<sub>1</sub>  
 ‘John got up.’
- c. Opgestann<sub>1</sub> is Jan t<sub>1</sub>.
- d. \* [t gemaakt]<sub>1</sub> heb Ik *dat kapot* t<sub>1</sub>.  
 [t made]<sub>1</sub> have I that broken  
 ‘I have made that broken.’

As (30) indicates, a DP object of the embedded infinitive can be scrambled into the higher clause, but neither a particle nor a small clause can. The same constraint is seen in cases of VP topicalization, which is what den Besten and Webelhuth (1990) argue derives the word-order in (31a). The VP that has topicalized in this example has lost its object, *dat artikel*, by Scrambling. But Scrambling can’t produce the VPs that have topicalized in (31b) and (31c); in these cases Scrambling would have had to move a particle or a small clause. To the extent, then, that this pattern is a diagnostic for Scrambling, we can conclude that Scrambling is responsible for putting the object in (30a) to the left of the root auxiliary. den Besten and Rutten dub the combination of post-verbal infinitival placement and scrambling in (30a) the “Third Construction” (there are two other Verb Raising constructions).

Alongside the Third Construction is one which superficially has the same order of constituents, but in which the participle takes on, strangely, an infinitival form:

- (32) ...dat Jan Marie heeft proberen [ te kussen].  
 ...that John Mary has tried [ to kiss].  
 ↑—————↓

In this construction, *proberen* functions as a participle without taking a participle form. The traditional literature on this construction calls these forms *infinitivo pro participio*; let us anglicize this to “infinitival participles.” Like the Third Construction, situations where this construction arise are restricted lexically, so while *proberen* allows for this option, verbs like *beloven* (‘promise’) or *besluiten* (‘decide’), don’t. Interestingly, unlike the Third Construction, in cases involving infinitival participles, the object cannot be found post-verbally, and the order auxiliary followed by infinitival-participle is fixed.

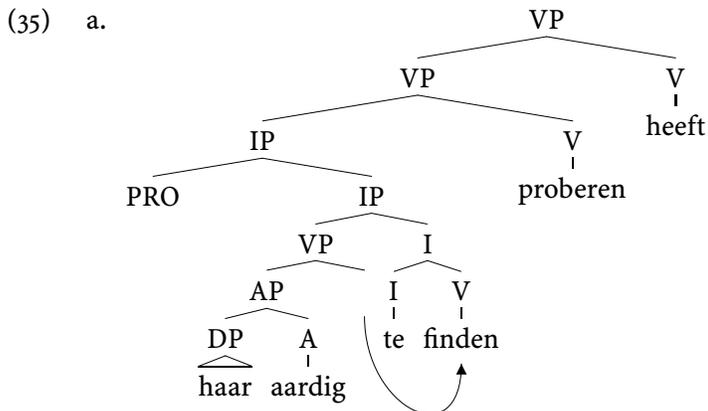
- (33) a. \* ...dat Jan Marie proberen heeft [te kussen].  
 ...that John Mary tried has [to kiss].

- (34) a. ...dat hij haar niet meer *op* heeft proberen [ te bellen].  
 ...that he her not more *up* has tried [ to call].  
 ‘...that he has no longer tried to call her up.’
- b. ...dat hij *haar echt aardig* heeft proberen [ te vinden].  
 ...that he *her really nice* has tried [ to find].  
 ‘...that he has tried to find her really nice.’
- c. ...that hij haar niet meer heeft proberen [*op* te bellen].  
 ...that he her not more has tried [up to call].
- d. ??...that hij haar *echt* heeft proberen [*aardig* te vinden].  
 ...that he her *really* has tried [nice to find].

(*ibid*)

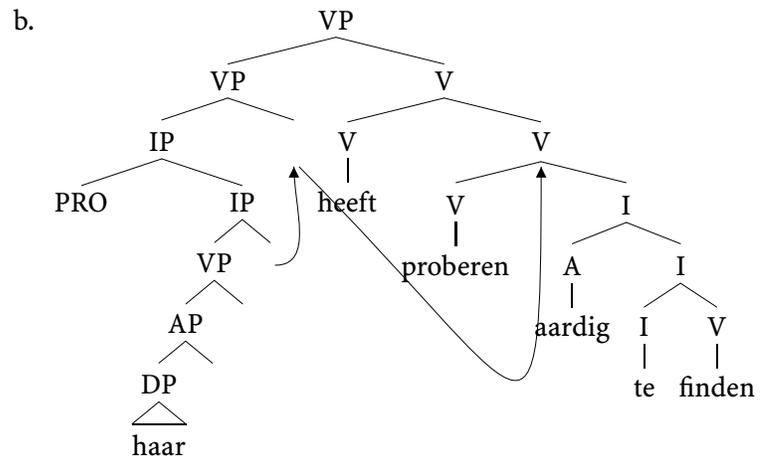
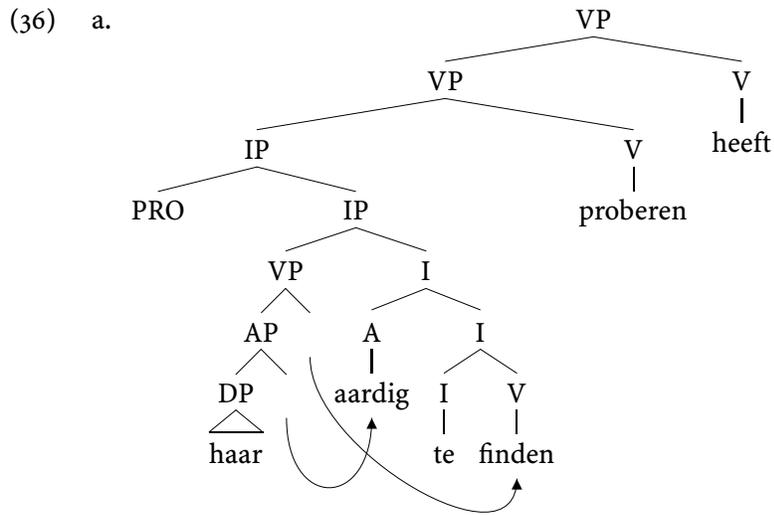
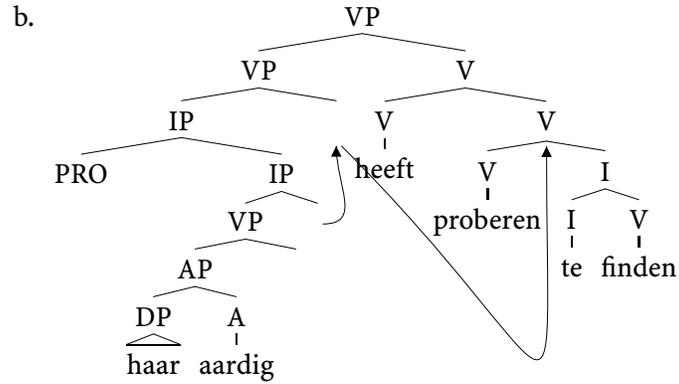
- b. \*...dat Jan heeft proberen [Marie te kussen].  
 ...that John has tried [Mary to kiss].

Unlike the Third Construction, these cases allow small clauses and particles to show up on either side of the verbal string, as (34) below illustrates. On a traditional verb-final approach, these word-orders could be derived by successive applications of verb, or predicate, movement, as sketched in (35) and (36).



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So we see in these two situations contexts where long-distance Scrambling is

permitted in Dutch. Although the particulars of these contexts differ, they share the following constraint: Scrambling is only possible from infinitival complement clauses which do not hold a complementizer. So, finite clauses in Dutch never allow their material to bleed into the higher clause; nor, interestingly, do infinitival clauses when they carry a complementizer, as in (37).

- (37) a. \* ...dat Jan *Marie* heeft geprobeerd [om *t* te kussen].  
 b. \* ...dat Jan *Marie* geprobeerd heeft [om *t* te kussen].  
 ...that John *Mary* tried has ['for' *t* to kiss].  
 '...that John has tried to kiss Mary.'
- (38) a. \* ...dat Jan *de krant* heeft proberen [om *t* te lezen].  
 ...that John the paper has tried ['for' *t* to read].  
 '...that John has tried to read the paper.'

Wynğærd (1993) argues that it's this constraint on long-distance Scrambling which long-distance Gaps in English track. In fact, the locality conditions on English Gaps do seem to better mimic these constraints than they do Ross's Islands. Consider, for example, some of the cases that Neijt (1979) compares.

- (39) a. The woman who John was a fool to have married was Jane.  
 b. John must be a fool to have married Jane, and Bill ~~must be a fool to have married~~ Martha.
- (40) a. What did Tom go to India to become?  
 b. Tom went to Florida to learn to play tennis, and Bill ~~went to Florida to~~ learn to play squash.
- (41) a. He asked who Alfred ~~was clearly intent on telling~~ to buy the lettuce?  
 b. Al was clearly intent on telling Alice to buy the lettuce, and Alfred was clearly intent on telling Jim to buy the lettuce.

(Neijt 1979, (52)-(53):131-2)

These cases illustrate the action of the Adjunct Condition, which describes the fact that extraction is inhibited from adjunct clauses; on Huang's (1982) view this constraint is collapsed with the Condition on Extraction Domains, later assimilated to Subjacency by Chomsky (1986). The strength of this effect in the arena of movement phenomena is notoriously variable, ranging from nearly acceptable, as in (39), to considerably worse, as in (41). But this variability is not matched in the cases of Gapping, which are uniformly quite bad. A similar mismatch resurfaces in connection with the Wh-Island Constraint, as (42) illustrates.

- (42) a. What did John wonder when to cook?

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- b. \* John wondered what to cook today and Peter ~~wondered what to cook~~ tomorrow.

(*ibid* (71), (73):137-8)

Ross points out that the Wh-Island constraint is relaxed to near perfect grammaticality in cases where the island is non-finite; but not so with Gapping. As a consequence (42a) is considerably better than (42b). In general, then, the Ross/Neijt account collapses the locality condition on long-distance Gapping with something that it imperfectly matches.

The match is imperfect in another respect as well. As Wyngærd (1993) emphasizes, long-distance movement is possible out of declarative finite clauses, while this is generally not the case for Gapping. This is what the contrast in (43) indicates.

- (43) a. \* Max said that you should buy bread and Peter ~~said that you should buy~~ wine.  
b. What did Max say that you should buy?

(*ibid* (88):143)

Neijt suggests that this difference reflects the fact that long distance movement can operate successive cyclically, whereas Gapping cannot. Thus, she relies on a condition like the Tensed S Condition to distinguish finite from non-finite clauses, and then lets long distance movement avoid the effects of the Tensed S Condition just when successive cyclic derivations are permitted. While it may be possible to work this scenario out successfully, it will not extend to the cases in (44).

- (44) a. \* Vivek wanted for Nishi to buy the video, and Carrie ~~wanted for Nishi to buy~~ the ice cream.  
b. \* Carrie prefers for Will to play video games, and Nishi ~~prefers for Will to play~~ pool.  
(45) a. Which video did Vivek want for Nishi to buy?  
b. Which video game does Carrie prefer for Will to play?

As (45) demonstrates, non-finite *for*-clauses are not islands for extraction, and yet they do resist long-distance Gapping.

To the extent, then, that long-distance Gapping obeys constraints different from those that hold of Wh-Movement, an account of Gapping based on context variables constrained by Ross's Islands is undermined. On the other hand, the constraints we have just witnessed on English long-distance Gaps are identical to those we identified for long-distance Scrambling. Not only do the constraints on long-distance Scrambling appear to match those on Gapping in the sense that the same environments are picked out, they match in the sense that the resulting violations are uniformly of the same character: very bad.

Let us follow Wyngærd's lead, then, and find the constituent in long distance Gaps from long distance Scrambling. Wyngærd's method of doing this is slightly different from that suggested above, however. He adopts the conclusion of Evers (1975) that the contexts in which long-distance Scrambling is permitted in Dutch are those where an operation collapses the string of verbs involved into a single  $V^0$ .<sup>9</sup> Long-distance Gaps can then be characterized as an elision of this single complex  $V^0$ . Thus Wyngærd (and Evers) subscribe to the view that long-distance Gapping reduces to simple Gapping, the difference residing solely in how many verbs have been collected into the Gapped  $V^0$ . So (24a) (=46a), for example, is formed not in the way indicated by (24b) (=46b), but rather as in (46c).

- (46) a. Some tried to drink pernod, and others ~~tried to drink~~ buttermilk.  
 b. ... [others [buttermilk<sub>1</sub> [VP ~~tried~~ [CP PRO ~~to drink~~  $t_T$ ]]].  
 c. ... [others [VP [ $V^0$  ~~tried to drink~~ [CP PRO  $t$   $t$  buttermilk]]].

Although this may be a possible way of conceiving of long-distance Gaps in simple cases like (46a), it will not extend to the complex ones in (47).

- (47) a. Some try to never eat MSG, and others ~~try to never eat~~ NATTO.  
 b. Some try to give MONEY to their friends, and others ~~try to give~~ ADVICE ~~to their friends~~.  
 c. Some decided to put PLANTS in their office, and others ~~decided to put~~ ART ~~in their office~~.  
 d. Some attempt to word LETTERS carefully, and others ~~attempt to word~~ MEMOS ~~carefully~~.  
 e. Some wanted to paint the BARN red, and others ~~wanted to paint~~ the HOUSE ~~red~~.  
 f. Some prefer to roll DOUGH flat, and others ~~prefer to roll~~ BUTTER flat.  
 g. Some lobbied to elect GOLDWATER senator, and others ~~lobbied to elect~~ SCHWEIKER ~~senator~~.  
 h. Some decided to eat BANANAS after running, and others ~~decided to eat~~ ORANGES ~~after running~~.  
 i. Some wanted to talk to LIZ in order to get recommendations, and others ~~wanted to talk~~ to BETSY ~~in order to get recommendations~~.  
 j. Some decided to talk to SAM about the vote, and others ~~decided to talk~~ to Mittie ~~about the vote~~.

<sup>9</sup> Stillings (1975) makes a similar suggestion.

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Given the generality of the strings that have Gapped in (47), we would be led to the view that a disturbingly large variety of strings can be packaged into  $V^0$ s.

Further, even in the simple cases there is some reason to think that only the method illustrated by (46b) is employed. Recall that long-distance Scrambling is subject to constraints on what kind of term can and/or must Scramble. The constraints differ depending on whether the Third Construction or the infinitival participle construction is involved. English does not seem to have infinitival participles, so if long-distance Scrambling is necessarily involved in forming long-distance Gaps we should expect to see the constraints on the Third Construction in the formation of long-distance Gaps. Recall that neither particles nor the predicates of small clauses may Scramble in the Third Construction (see (30)); and, indeed, neither particles nor predicates of small clauses make very good remnants in long-distance Gaps:

- (48) a. \* Some have tried to turn the heat up, and others ~~have tried to turn the heat~~ down.
- b. \* Some have tried to turn the lights on, and others ~~have tried turn the lights~~ off.
- c. \* Some tend to find the problem difficult, and others ~~tend to find the problem~~ easy.
- d. \* Some have tried to make Gapping unsolvable, and others ~~have tried to make Gapping~~ solvable.

Let us assume, then, that the constituents which long-distance Gaps target are formed by long-distance Scrambling of the remnant. Not only will this account for (48), but it will also capture the locality constraints that appear to determine which strings may Gap. (But be warned: there are sundry counter-examples to these locality constraints taken up in the appendix.)

What we have seen, then, is that there is some reason to hope that VP Ellipsis and Gapping can be collapsed, even though they occasionally unveil different pictures of constituency and differ on whether to include the finite auxiliary. Equate Gapping with ellipsis of a VP from which the remnants have Scrambled, and a goodly portion of the dilemma resolves.

But this hope is false. For while the pattern of remnants is often very similar, there are critical differences between VP Ellipsis and Gapping that stand in the way of a complete reduction.

## 1.2 No

The previous section treats as uncontroversial the claim that examples such as (49a) and (49b) trace back to the same process of ellipsis.

- (49) a. Sal might eat natto before Holly does  $\Delta$ .  
 b. Sal might eat NATTO before Holly does  $\Delta$  RICE.

Examples such as (49b) were taken to be nothing more than the process that generates examples such as (49a) fed by a movement operation that removes the object from VP. Indeed, the extent to which bounding constraints on movement are responsible for determining the size of the string that can elide in contexts like (49b), we have evidence for this conclusion.

But, in fact, that (49b) is a special instance of (49a) is not uncontroversial. There are some differences in their distribution which are not presently understandable if they are the same. Levin (1986) notes,<sup>10</sup> for instance, that while VP Ellipsis can occur within an adverbial that precedes its antecedent VP, this is much more awkward in cases parallel to (49b).

- (50) a. Although it doesn't always  $\Delta$ , it sometimes takes a long time to clean the hamster's cage.  
 b. ?? Although it doesn't  $\Delta$  Sally, it takes Karen a long time to clean the hamster's cage.<sup>11</sup>

(Levin 1986 (8)-(9): 53)

For these reasons, Levin concludes that the construction illustrated in (49b) is not an instance of VP Ellipsis, and dubs it "Pseudogapping."<sup>12</sup>

Sally McConnell-Ginet points out also that Pseudogapping degrades across sentences in a way that VP Ellipsis doesn't. For example, the conversation in (51) is considerably better than the parallel one in (52).

- (51) A: I want to understand VP Ellipsis.  
 B: I do  $\Delta$  too.

<sup>10</sup> See Levin (1986, section 2.92.) for a more extensive comparison of VP Ellipsis and this construction, with a variety of other differences.

<sup>11</sup> Levin's example is actually:

- (1) \*Although it doesn't  $\Delta$  me, it takes Karen a long time to clean the hamster's cage.

But this example could be degraded by the fact that the remnant of ellipsis is a pronoun, which, as she notes elsewhere, conflicts with the focus requirements of the construction. In fact, I find (50) a considerable improvement on (1), and harbor the suspicion that the contrast in (50) is not significant.

<sup>12</sup> Because it's also not Gapping, she concludes.

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- (52) A: I want to understand VP Ellipsis.  
?\* B: I do  $\Delta$  Sluicing.

Despite these differences, I suggest that we gamble that they do not reveal the falsity of collapsing Pseudogapping to VP Ellipsis, but instead reflect the effects of the other properties that distinguish Pseudogapping from VP Ellipsis. Perhaps the way in which the remnant of the Pseudogap is put into a contrastive focus relationship with its correlate places extra restrictions on it, for instance.

Nonetheless, the mysterious differences between VP Ellipsis and Pseudogapping cloud our project of determining whether or not Gapping belongs with these processes as well. When we compare Gapping with ellipsis, to which of VP Ellipsis or Pseudogapping should we make the comparison? Because the goal of this section is to show that Gapping is much more restricted than are ellipsis processes, it is safer for us to compare Gapping with Pseudogapping, since Pseudogapping is more conservative than VP Ellipsis. If Gapping is more restrictive than Pseudogapping, than it will also fail to live up to the promiscuity of full blown VP Ellipsis. Moreover, Gapping and Pseudogapping are the more superficially similar: in their normal use, they both set up comparisons between two or more clauses by way of contrasting the subjects, and some other pair of terms, in those clauses. Thus, for example, the subjects and objects of the coordinated clauses in (53a) are contrasted in a way parallel to the contrast that holds between subjects and objects of the coordinated clauses in (53b).

- (53) a. Sal eats beans and Holly ~~eats~~ rice.  
b. Sal eat beans and Holly does  $\Delta$  rice.

For these reasons, then, this section will use Pseudogapping as the representative exemplar of “ellipsis.”

There are five kinds of ways in which Gapping differs from Pseudogapping and which, when taken together, point to quite a different mechanism behind them. We take up each of these in turn.

### 1.2.1 The licensing environments differ

The syntactic position that an elided VP may have relative to its antecedent is quite free: the best known constraints being that the antecedent may neither contain nor precede and command the ellipsis. The relation between a Gap and its antecedent is considerably stricter. First, Gapping is restricted to coordinations. Jackendoff (1971) suggests that Gapping is best in coordinations involving *and* or *or*. I also find them acceptable with the conjunctive use of *then*, and with *but*, if the coordinate containing the Gap holds a negation (this, presumably, is what causes the contrast between (54d) and (54e)). Ellipsis, by contrast, can apply into subordinate or coordinate clauses of all varieties.

- (54) a. Betsy likes cats and Liz ~~likes~~ dogs.  
 b. Julie put out the trash, or Andrew ~~put out~~ the recycling bin.  
 c. First Sarah bought a car, then Liz ~~bought~~ a garage.  
 d. ?\* Vivek likes Chinese action films, but Nishi ~~likes~~ sci-fi movies.  
 e. \* Sam ate something, but Mittie ~~ate~~ nothing.  
 f. \* Some ate nattoo TODAY, because others ~~ate nattoo~~ YESTERDAY.
- (55) a. Betsy could like cats and Liz might  $\Delta$  dogs.  
 b. Julie will put out the trash, or Andrew might  $\Delta$  the recycling bin.  
 c. Vivek might like Chinese action films, but Nishi  $\Delta$  doesn't sci-fi movies.  
 d. Some will eat nattoo TODAY, because others had  $\Delta$  YESTERDAY.

There is something about Gapping that permits it only in coördinations.

Even in coördinations, however, Gapping and ellipsis are licensed in different configurations. Consider, for example, cases where three clauses are brought together and the last contains the elision. While this environment places some strain on Pseudogapping,<sup>13</sup> to the extent that judgements are possible, the elided material may find its antecedent in the first clause, as in (56).

- (56) ? Sam usually drinks martinis, or it's an AA meeting and no one can  $\Delta$  ANY alcohol.

By contrast, this is quite severely prohibited for Gapping:

- (57) \* Sam usually drinks martinis, or it's an AA meeting and no one ~~drinks~~ ANY alcohol.

Sag (1980, p. 193) describes this as a requirement: Gapping can find an antecedent only from the immediately adjacent conjunct. In fact, a more accurate description appears to be that the clause which houses the Gap must be conjoined or disjoined with the very clause that houses the antecedent. This can be seen by considering examples such as (58).

- (58) a. Philip will go to Los Angeles and [[Chuck might end up in Toledo] or [Sarah ~~might end up~~ in Tromsø]].  
 b. \* [Philip will go to Los Angeles] and [Chuck might end up in Toledo] or Sarah ~~might end up~~ in Tromsø.

As the bracketing indicates, this string has only a reading in which "Philip will go to Los Angeles" is conjoined with the entire disjunct following it. The reading in which "Sarah in Toronto" is disjoined with a coördination consisting of "Philip

<sup>13</sup> This is another context in which VP ellipsis is more readily permitted, as we shall see.

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will go to Los Angeles” and “Chuck might end up in Toledo” is not available. This translates into the observation that this sentence is true only if “Philip will go to Los Angeles” is true. In this respect, it differs from its non-Gapped version, in (59), where it is possible to understand this sentence to be true even if Philip won’t go to L.A.

- (59) Philip will go to Los Angeles and Chuck might end up in Toledo or Sarah might end up in Tromsø.

Our first conclusion, then, should be that Gapping is entangled with the syntax of coördination. Ellipsis isn’t.

Gapping is also very sensitive to embedding in a way that ellipsis isn’t. Ellipsis can elide material that sits within an embedded clause, but Gapping cannot. This is what is responsible for the contrast in (60).

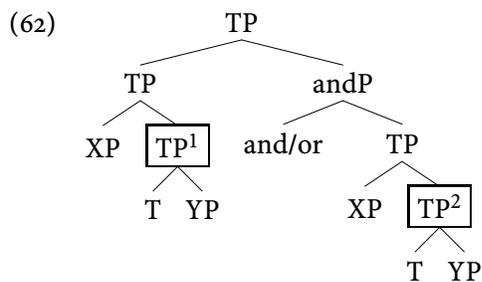
- (60) a. Mittie ate nattoo, and I thought that Sam had  $\Delta$  rice.  
 b. \* Mittie ate nattoo, and I thought Sam ~~ate~~ rice.

Moreover, ellipsis can seek an antecedent in an embedded clause, but Gapping cannot. This is what is responsible for the contrast in (61).

- (61) a. Either CHUCK thought Mittie had eaten NATTO or LIZ has  $\Delta$  RICE.  
 b. \* Either CHUCK thought Mittie has eaten NATTO or LIZ ~~has eaten~~ RICE.

In general, as Hudson (1976, p. 543), Hankamer (1979, p. 19ff; 1973, note 9, p. 29), and Sag (1980, p. 190) observe, Gapping may relate material immediately dominated by the VPs of coördinated clauses, but nothing more deeply embedded.

What we’ve seen here, then, is that Gapping is trapped into a very narrow environment. Focusing just on situations where Gapping affects full clauses, this environment can be schematically represented with (62) below. Gapping is required



to affect the boxed TPs in this skeleton, with TP<sup>1</sup> constituting the antecedent and TP<sup>2</sup>, minus whatever remnants have escaped from it, making up the Gap. That VP

ellipsis and Pseudogapping can exist outside this tiny niche suggests that we do not want to equate them.

Note that I adopt here a binary-branching representation of coördinations and disjunctions — one that involves a phrase headed by the conjunction or disjunction and includes the phrase that follows it but excludes the phrase that precedes it. Ross (1967) argued for such a structure, and it is given an extensive defense in Munn (1993). This decision plays a somewhat limited role in what follows.

### 1.2.2 The scope of terms in the left conjunct differs

Unsurprisingly, in cases where an ellipsis removes material from the second of two conjuncts, the two conjuncts behave just like coördinates without ellipsis with respect to the scope of the terms inside them. So, for instance, the negation in the first conjunct of (63a) negates just the first clause, and the same is true in (63b) and (63c) where ellipsis has applied.

- (63) a. Kim didn't eat natto and Sandy ate rice.  
 b. Kim didn't eat natto and Sandy did  $\Delta$ .  
 c. Kim didn't eat natto and Sandy did  $\Delta$  rice.

In all of these examples, then, the sentences are true only if what the second conjunct says about Sandy is true.

But this isn't the case in Gapping, as Siegel (1987) and Oehrle (1987) discovered. In (64), for example, negation takes scope over the entire coördination.

- (64) Kim didn't play bingo and Sandy ~~didn't~~ sit at home all evening.  
 (Oehrle 1987, based on (28):205)

What (64) asserts is that it's not the case that both Kim played bingo and Sandy sat at home all evening. It is possible, in other words, for this sentence to be true even if its second conjunct (i.e. "Sandy didn't sit at home all evening") is false.

The same fact can be demonstrated with modals, though it is not possible in this context to form contrasting cases of ellipsis. Consider (65).

- (65) a. One man must get the majority of votes and the other must win the election.  
 b. One man must get the majority of votes and the other ~~must~~ win the election.

What (65b) describes is a perverse anti-democracy, where the minority candidate always wins the election, as if one were stuck in the U.S. in 2000 forever. The modal here includes the coördination in its scope. By contrast, (65a) claims merely that

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there is a difference in two men: for one there is the requirement that he can get the majority of votes, and for the other there is the requirement that he can win the election. In a democracy, (65a) would be false.

McCawley (1993) discovered that the same odd scope fact holds for the subject of the first conjunct in Gapping constructions. In (66), for instance, the subject of the first conjunct may bind the pronoun in the second conjunct.<sup>14</sup>

- (66) a. Not every girl<sub>1</sub> ate a GREEN banana and her<sub>1</sub> mother ate a RIPE one.  
b. No boy<sub>1</sub> joined the navy and his<sub>1</sub> mother ~~joined~~ the army.

This is not possible, however, in parallel examples involving ellipsis:

- (67) a. \* Not every girl<sub>1</sub> ate a green banana and her<sub>1</sub> mother did  $\Delta$  too.  
b. \* Not every girl<sub>1</sub> ate a GREEN banana and her<sub>1</sub> mother did  $\Delta$  a RIPE one.  
(68) a. \* No boy<sub>1</sub> joined the navy and his<sub>1</sub> mother did  $\Delta$  too.  
b. \* No boy<sub>1</sub> joined the navy and his<sub>1</sub> did  $\Delta$  the army.

What these examples suggest, then, is that Gapping must allow for a sentence with the shape in (69a) to receive an interpretation like that in (69b), where X is scope-bearing.

- (69) a. DP<sup>1</sup> X YP and DP<sup>2</sup>  $\times$  YP  
b. DP<sup>1</sup> X [ [ YP] and [DP<sup>2</sup> YP ] ]

In fact, because the examples in (63c) and (65b) are unambiguous — the coördination is, in each case, within the scope of the modal or negation — Gapping must invoke a process that forces an interpretation along the lines diagrammed in (69b). Neither VP Ellipsis nor Pseudogapping have this effect.

### 1.2.3 The categories affected differ

As its name implies, VP Ellipsis canonically involves VPs. It may turn out that the same mechanism also allows for elliptical clauses (i.e., “Sluicing,” as in (70)) and NPs (i.e., “ $\bar{N}$  Deletion,” as in (71)).

- (70) I know you talked to someone, but I can't remember who  $\Delta$ .

<sup>14</sup> Barry Schein cautions that examples such as these must be crafted so as to guard against the mechanism that allows one sentence to be subordinated to another for the purposes of binding, as illustrated by (1), for example.

- (1) Every woman exited through the window. Her children followed immediately after.

That has been done here by selecting quantifiers that do not engage in this process.

(71) Sal read Bertie's book, but he hasn't read [<sub>DP</sub> Richie's  $\Delta$ ] yet.

But if so, this mechanism is restricted to VP, NP and TP. It is unable to affect phrases of any other category, and in particular, Adjective Phrases are beyond its reach.

- (72) a. \* Vivek made Nishi angry at Melissa, before he made Carrie [<sub>AP</sub>  $\Delta$ ].  
 b. \* Will seems happy today, while Nishi seemed [<sub>AP</sub>  $\Delta$ ] yesterday.  
 c. \* I consider Betsy pretty, while you consider Sam [<sub>AP</sub>  $\Delta$ ].

Knowing whether there are parallel versions of Sluicing and  $\bar{N}$  Deletion that, like Pseudogapping, leave a remnant of the elided phrase behind is not trivial. Cases like (73) are candidates, perhaps.

- (73) a. I know that some man danced with some boy, but I can't remember who  $\Delta$  with whom.  
 b. Sal read Bertie's book about marriage, but he hasn't yet read [<sub>DP</sub> Richie's  $\Delta$  about phrase markers].

In any case, as expected, examples like these are also not possible in contexts where an AP would have had to elide.

- (74) a. \* Vivek made Nishi angry at Melissa, before he made Carrie  $\Delta$  at Will.  
 b. \* Will seems happy with Vivek, while Nishi seemed  $\Delta$  with Missy-Sue.

Roughly, then, ellipsis seems capable of targeting VP, NP and clauses, but not other categories, and certainly not APs.

The literature on Gapping typically focuses on cases in which projections of  $V^0$  are targeted, and all of our examples to this point have too. One problem in determining whether Gapping can affect other categories is precisely in distinguishing the result of Gapping from the result of ellipsis. Examples like (75), for instance, could be instances of Gapping, or could arise from whatever ellipsis process is responsible for (73b).<sup>15</sup>

(75) Sal read Bertie's book about marriage and Richie's about phrase markers.

One way of telling these two apart would be to employ the diagnostic of scope established in the previous section. If only Gapping allows material in the first of the conjuncts to include material in the second of the conjuncts in its scope, then examples such as (76) should be grammatical only if they arise through Gapping.

(76) Sal has read no woman's<sub>1</sub> book about marriage and her<sub>1</sub> husband's about divorce.

<sup>15</sup> See Jackendoff (1971) for some discussion of this problem in the context of noun phrases.

## 1. Bridging the Gap

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This particular example is a bit awkward, and I haven't been able to produce properly controlled comparisons with unambiguously elided  $\bar{N}$ s, so our conclusions must be tentative. Nonetheless, the majority of speakers I've consulted find that *no woman* can bind *her* in (76), suggesting a scope arrangement that is diagnostic of Gapping. I propose that we take Gapping to be able to elide nouns as well as verbs, therefore.

Like VP Ellipsis, there aren't examples in which Gapping has affected  $C^0$ ,  $Q^0$ ,  $P^0$  or the other categories of English.<sup>16</sup> Interestingly, however, Gapping differs from Ellipsis in being able to elide projections of  $A^0$ , as in (77).

- (77) a. I consider Liz fond of chocolates and Sam ~~fond~~ of pies.  
b. I made Sam angry at Beaner and Betsy ~~angry~~ at Perseus.

As expected, the diagnostic scope relations show up in these settings as well. Binding is possible into the second conjunct from material presumably belonging to the first conjunct, as (78) illustrates.

- (78) a. I found no father<sub>1</sub> at the concert fond of the violent rap tunes or his<sub>1</sub> child ~~fond~~ of the medieval ballads.  
b. This won't make every participant<sub>1</sub> angry at the judges or her<sub>1</sub> child ~~angry~~ at the sponsors.

So while there is some overlap in the categorial constraints on these two operations, only Gapping is able to elide  $A^0$  and AP. Whatever is responsible for governing which sorts of phrases may elide, it does not seem to be what is responsible for restricting where Gapping can apply. Yet another obstacle, then, for reducing them to the same process.

### 1.2.4 The strings affected differ

Section 1.1 argues that the strings which Pseudogapping and Gapping can target is a function of Scrambling, and consequently leads to the expectation that both of these processes should be able to affect the same class of strings. If, for instance, Pseudogapping and Gapping are to strand some term,  $\alpha$ , then only those phrases from which  $\alpha$  can scramble are potential targets for these operations.

<sup>16</sup> To construct examples that demonstrate this for  $C^0$ ,  $Det^0$ ,  $Q^0$  and so on is difficult enough to avoid trying. But the unGapability of  $P^0$  is shown by (1).

- (1) a. \* I saw the moon in the East and the stars ~~in~~ the West.  
b. \* With the moon in the East and the stars ~~in~~ the West, we should look North.

However, as has already been revealed, this isn't completely true. There are a few strings which Gapping can affect that Pseudogapping cannot. In certain small clause contexts, for instance, it is possible to Gap the subject of the small clause along with the higher verb where it is not possible to do the same with Pseudogapping. This is what's behind the contrasts between (79) and (80).<sup>17</sup>

- (79) a. Some elected the schmucks SENATORS and others ~~elected the schmucks~~ CONGRESSMEN.  
 b. Some considered Sandy HANDSOME and others ~~considered Sandy~~ PLAIN.  
 c. Some believe Gapping to REVEAL much and others ~~believe Gapping~~ to OBSCURE much.
- (80) a. \* Because someone has elected schmucks Senators we will  $\Delta$  Congressmen.  
 b. \* Even though some considered Sandy handsome, others did  $\Delta$  plain.  
 c. \* Even though some believe Gapping to REVEAL much, others do  $\Delta$  to OBSCURE much.

And there are also situations involving double object constructions in which Pseudogapping and Gapping depart ways. While Gapping may target the first object of the construction, along with the verb, stranding the second object, Pseudogapping cannot:

- (81) a. Some gave the men peanuts and others ~~gave the men~~ chocolates.  
 b. Some sent the legislators letters and others ~~sent the legislators~~ emails.
- (82) a. ?? While some might give the men peanuts, others will  $\Delta$  chocolates.  
 b. ?? While some can send the legislators letters, others should  $\Delta$  emails.

While these contrasts aren't as marked as those in (79) and (80), they are still present.

Like the other differences chronicled here, these provide reasons for resisting the temptation to reduce Gapping to ellipsis. But they also indicate that there is something flawed in the mechanism which section 1.1 proposes for finding the constituents that Gapping targets. We will have to reexamine this conclusion.

### 1.2.5 The identity conditions on antecedence differ

Elided material derives its meaning from an antecedent in a way that is not yet completely understood. The present best guess seems to be that it is a strengthened

<sup>17</sup> The cases in (79a) and (80a) are repeated from (22f) and (23e).

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version of the sort of anaphora that “deaccenting” is.<sup>18</sup> Deaccenting, in turn, is a kind of discourse anaphora that relates the meanings of previously uttered material with the meanings of the phrases that are deaccented. So, for example, the material in small font in each of the sentences in (83) can be deaccented because its meaning matches, in some sense, what is underlined in the sentences previous to them.

- (83) a. Someone gave Sal a car before Gerry was given one.  
b. Marc told Sal the story before Gerry heard it.  
c. Mark called Stephanie a Finneran lackey and then Frank insulted her.

As these examples illustrate, what it means for deaccented material to “match” something previously uttered boils down to something along the lines of: “is implied under some set of presuppositions.” Thus, for instance, knowing just a little about the notorious Speaker of the House in Massachusetts in 2000 warrants the implication that Stephanie has been insulted by what is said in (83c). For a method of working this out, see Schwarzschild (1999), and Rooth (1985, 1992). Material can be deaccented, then, under a very loose sense of “identity” with an antecedent.

Ellipsis has a stricter requirement than deaccenting, as can be seen by the fact that in none of the examples in (83) may the deaccented VP be elided.

- (84) a. \* Someone gave Sal a car before Gerry was  $\Delta$ .  
     $\Delta$  = given a car  
b. \* Marc told Sal the story before Gerry did  $\Delta$ .  
     $\Delta$  = hear it  
c. \* Mark called Stephanie a Finneran lackey and then Frank did  $\Delta$ .  
     $\Delta$  = insulted her

But there is still some looseness which suggests that it is, like deaccenting, essentially a condition on meaning. For example, Sag points to examples such as (85) which, like (83a), allow an active and passive VP to be identified.

- (85) i. Botanist: “That can all be explained.”  
      ii. Mr. Spock: “Please do [<sub>VP</sub>  $\Delta$ ].”

(Sag 1980, note 2: 75)

And Bonnie Webber (1978) examines cases such as (86), in which the elided VP seems to fashion an antecedent out of the meanings of two previous VPs.

<sup>18</sup> This is an idea that’s had a long history, showing up as a suggestion in some of Chomsky’s early work. Sag (1976) explores it, and it has a systematic examination in Tancredi (1992), Fox (2000) and Merchant (2001).

- (86) Wendy is eager to sail around the world and Bruce is eager to climb Killimanjaro, but neither of them can  $\Delta$  because money is too tight.

And, as Sag (1980), Hardt (1993), among others, have observed, it is even possible for the antecedent to an elided VP to be found within a DP, as in (87).<sup>19</sup>

- (87) ?Sal is a talented forger, but Holly can't  $\Delta$  at all.

Many other examples of the looseness of ellipsis can be found in Fiengo and May (1994), Hardt (1993); and see also Fox (2000) and Merchant (2001), where, in addition, (different) methods of strengthening the condition on deaccenting to account for these facts are proposed.

Gapping does not partake of this sort of looseness. It is not that the string which Gaps must have precisely the same meaning as its antecedent — we will review some cases in a moment — but the sort of disparity that (85)-(87) illustrate are not tolerated by Gapping. Identifying an active VP with a passive one, for instance, is not allowed in Gapping to the degree that it is in Pseudogapping:

- (88) a. ? The budget cuts might be defended publicly by the chancellor, but surely she wouldn't  $\Delta$  her labor policies.  
 b. \* The budget cuts might be defended publicly by the chancellor, and the president ~~might defend publicly~~ her labor policies.

While there is a feel of coercion in the Pseudogapping version of this situation that is absent in the VP Ellipsis example, there is nonetheless a sharp distinction between it and Gapping.

Similarly, Gapping does not permit a VP it affects to be matched with the contents of a DP, as (87) indicates ellipsis can. Again reverting to the Pseudogapping version of this case, there is a contrast between (89a) and (89b).

- (89) a. ? Sal may be a talented forger of passports, but surely he can't  $\Delta$  paintings.  
 b. \* Sal may be a forger of passports and Holly ~~may forge~~ paintings.  
 (compare: Sal may be a forger of passports and Holly ~~may be a forger~~ of paintings.)

Gapping is also incapable of fashioning the sort of antecedent out of previous sentences that we see VP Ellipsis doing in (86). However, in this situation, it is also very hard to construct a successful Pseudogapping case that parallels (86). Nonetheless, perhaps there is a perceptible difference between a Pseudogapping case like (90a) and a Gapping case like (90b).

<sup>19</sup> See Fu, Roeper, and Borer (2001) for a recent analysis of this case.

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- (90) a. ?? Wendy should sail the English Channel and Bruce climb Whitney, but surely they won't  $\Delta$  the Pacific or Killiminjaro.  
b. \* Wendy should sail the English Channel and Bruce climb Whitney, and their partners ~~should sail and climb~~ the Pacific or Killiminjaro.

Given the slightness of this contrast, however, perhaps it's safer to set it aside as inconclusive.

Even so, wherever it is possible to tell, Gapping and ellipsis do not seem to use the same identity conditions in seeking antecedents. Gapping enforces a much stricter match between the string it deletes and its antecedent. This too might be read as a clue that these are distinct processes.

Let's not leave this section, however, with the impression that Gapping imposes exact identity between the material that is deleted and its antecedent. The familiar "strict" and "sloppy" readings that variables invoke in ellipsis (and other contexts of anaphora) are also present in Gapping. Hence, the pronoun in the Gapped string of (91) may be bound to either *every girl* or *every boy*.

- (91) Every girl showed her project to the teacher and every boy ~~showed her or his project~~ to the principal.

The interpretation that variables receive in ellipsis contexts, then, also shows up in Gapping contexts.

And, also like ellipsis, Gapping displays what Grinder and Postal (1971) called the "Missing Antecedent" phenomenon. This refers to the fact that an indefinite in the antecedent to an ellipsis may license the occurrence of a "fresh" indefinite in the ellipsis site. In (92), for instance, it is possible to understand the book that Sally read to be different than the one that Jim read.

- (92) Sally read a book yesterday and Jim did  $\Delta$  too.

The same sort of scenario can be manufactured with Gapping:

- (93) Some gave a book to Sally and others ~~gave a book~~ to Jim.

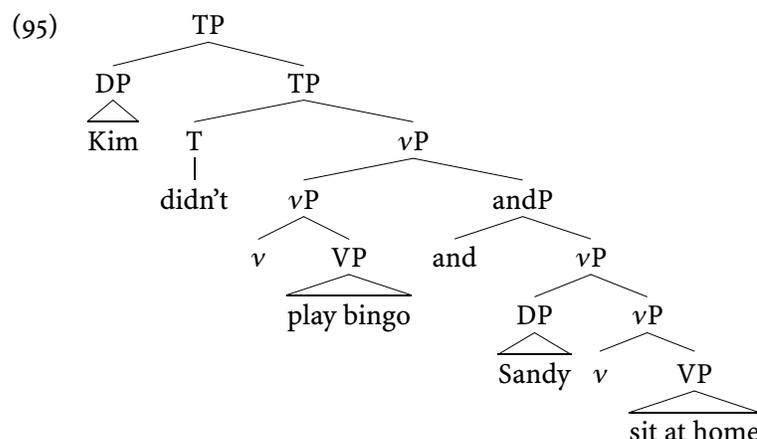
(93) does not require that Sally and Jim have received the same book. As with (92), this sentence finds a way of being interpreted as if there are two occurrences of *a book* in it. At least to this extent, then, Gapping and ellipsis share properties.

### 1.2.6 Setting the scene

This chronicle of differences between ellipsis and Gapping does more than lead us from the temptation to collapse the two. It carves out a shape to the Gapping construction that helps us recognize it for what it is. Let's cobble together what we've seen here so that this outline begins to materialize.

Consider first the scope facts examined in section ?? . These phenomena suggest that a Gapping example like (94) has the shape in (95) below.

(94) Kim didn't play bingo and Sandy sit at home.



Siegel (1987) argues that these examples get an interpretation of this sort because (95) is, in fact, their correct surface parse.<sup>20</sup> What's surprising about the parse in (95), of course, is the relation the subjects have to their predicates. Under the assumptions of the derived subjects hypothesis, subjects must originate within the *v*P's that support their  $\theta$ -role, but surface as Specifier of TP, where their Case is licensed. To square these assumptions with (95) requires that *Kim* be interpreted as if it were within the coördination, and that *Sandy* be Case licensed as if it were in Specifier of TP. But if these difficulties could be overcome, some of the other properties we've just witnessed will follow.

Consider, for instance, the very restricted distribution that Gapping has. Recall, for example, that when a clause with Gapped material appears in the last of three or more conjuncts, it must find its antecedent in the clause that it is conjoined with. Under (95), this follows in cases such as (94) from the fact that the material that has "Gapped" embeds the phrases that are conjoined. That is, if (95) can be generalized to all cases of Gapping, then the coördination will, despite appearances, always follow the material that constitutes the Gap's "antecedent." As a consequence, the clause containing the Gap will necessarily immediately follow the clause that has its antecedent.

For similar reasons, if the parse in (95) could be generalized to all instances of Gapping, the differences just reviewed in the identity conditions will be derived.

<sup>20</sup> Modulo, of course, the differences in how sentences are represented in more contemporary theory.

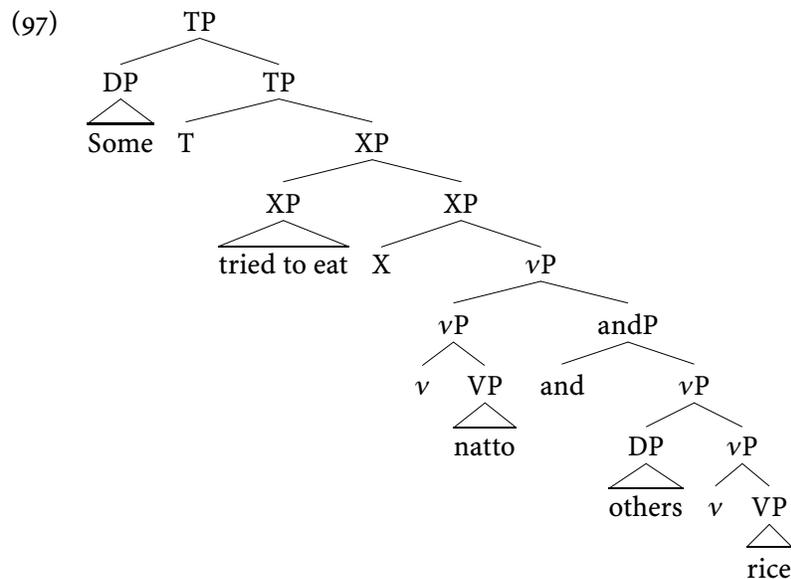
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Because (95) denies that there is any form of ellipsis in Gapping, there will be none of the looseness characteristic of an elided phrase and its antecedent.

But generalizing the parse in (95) to other forms of Gapping is far from trivial. It requires finding a way of letting *v*Ps with oddly situated subjects be coördinated not only under modal verbs, but also under all of the other strings that can be Gapped. It would require, for instance, that the sentence in (96) find a parse along the lines of (97) below.

(96) Some tried to eat natto and others rice.



Additionally, it would require that a way be found of restricting these constructions so that they arise only in coördinations. And, worse, it'll need a method of resolving the sorts of parses that (97) represent with the fact that there is *some* looseness in the relationship between Gapped material and its antecedent.

Despite the discouraging tallness of this order, this is just what will be attempted in the following section, with the help of across-the-board movement.

### 1.3 Gapping uses skewed coördinations

Let's begin by addressing the problems in using the Siegel-based representation in (95). These problems amount to fixing the general requirements on the surface position of subjects so that the subjects in (95) can have the positions they do. My

strategy will be to allow these requirements to have an unexpected outcome in contexts of coordinations because of a property unique to coordinations. This will derive the fact that Gapping is tied to the syntax of coordinations, and is therefore found nowhere else.

### 1.3.1 Restricting gaps to coordinations

The unique property of coordinations is, to put it very descriptively, that they allow material outside the coordination to be “shared” by each coordinate. By “shared,” I mean that the material can satisfy parallel grammatical requirements in each of the conjuncts it combines with. The most famous example of this is “across-the-board” movement, in which the movement operation is able to allow one “shared” term to behave as if it had moved from parallel positions in each conjunct. An example is (98), where the term *who* is enabled to bind variables in the spots occupied by  $t_1$  in each conjunct.

(98) Who<sub>1</sub> has Liz talked to  $t_1$  and visited  $t_1$ ?

In this case, what coordination exceptionally permits is for the conditions that link moved phrases with their traces to be independently satisfied in each conjunct by sharing *who*.

There is a rich and interesting literature tackling the question why coordinations have this remarkable property. In the generative tradition, this includes Williams (1977, 1978), Goodall (1987), Pesetsky (1982), Haik (1985), Muadz (1991), Moltmann (1992), Zoerner (1995) and especially Munn (1993). Although I will ascribe this “sharing” property of coordinations a central role in my account of Gapping, I have nothing to add to the present understanding of what is responsible for it. As a consequence I will gamble that the particulars of whatever produces this effect can be ignored, and rely on the mere description in (99) instead.

(99) **SHARING**

Let  $\{\beta_1, \beta_2, \dots, \beta_n\}$  be terms in a coordination,  $\mathcal{C}$ , such that each  $\beta_x$  is in a parallel position of a different conjunct of  $\mathcal{C}$ ; and let  $\alpha$  be a term outside  $\mathcal{C}$ . For any syntactic relation,  $\mathcal{R}$ :  $\mathcal{R}$  holds of  $(\alpha, \{\beta_1, \beta_2, \dots, \beta_n\})$  iff  $\mathcal{R}$  holds of  $\{(\alpha, \beta_1), (\alpha, \beta_2), \dots, (\alpha, \beta_n)\}$ .

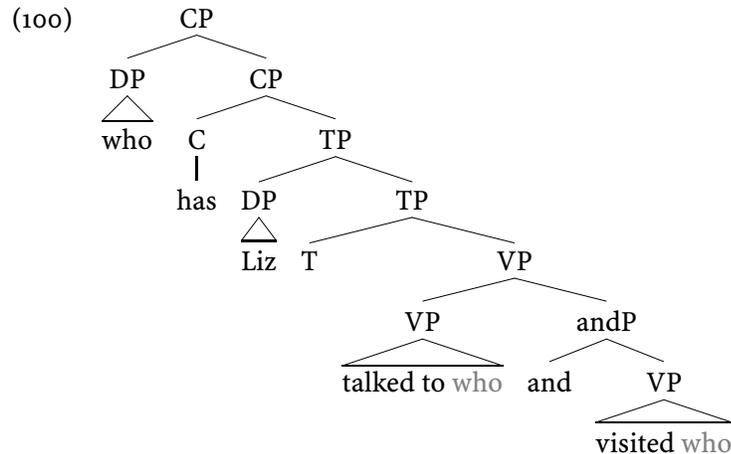
To operationalize this, the precise nature of “parallel” is required, as is what counts as a syntactic relation. But because this will never rise beyond a description, I will just fill in detail as it becomes necessary.

SHARING might be used to allow for the across-the-board movement in (98) in the following way. First, assume that movement operations like these amount to a

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pair of operations COPY and MERGE, as in Chomsky (1995). On this view, movement operations do not change the positions in a phrase marker that a moved item has, but instead adds positions for this term. An application of across-the-board movement, as in (98), for example, would create a representation like (100) below. Understand the shaded terms to be copies that will go unpronounced. The standard



assumption is that, in contexts of *wh*-movement, all but the highest copy fails to be interpreted phonetically. Let's express this with the two constraints in (101).

- (101)
- i. Only one copy may be phonetically interpreted.
  - ii. Only a copy *c*-commanded by another copy can be unpronounced.

In (100), (101) has the desired effect of letting only the highest *who* be pronounced.

This theory of movement requires some procedure for semantically interpreting the copies correctly. This procedure must ensure that all copies are interpreted so that together they make a single reference. They do not refer independently. In place of a full-blown theory of that sort, let us here adopt the expedient of (102).

- (102) Unpronounced copies are interpreted as variables bound to the pronounced copy.

This certainly is a true description of the outcome of the procedure in a wide range of cases. It will serve for the cases that we are going to encounter in the immediate future. I will adopt the convention of representing unpronounced copies that get interpreted as variables with the familiar “trace” notation: “*t*,” with an index revealing what phrase binds it.

What's unusual about the representation in (100) is that there are two traces to the chain that the highest *who* heads. That is, there are two copies that get interpreted as variables for this wh-phrase. It's this attribute of (100) that should be permitted only in coordinations, and so should arise by virtue of SHARING. A standard way of ensuring that wh-phrases bind only one variable is through Koopman and Sportiche (1983)'s BIJECTION PRINCIPLE. This principle is designed to account for certain cross-over effects in variable binding, and so has parts to it that determine in syntactic terms what a "variable" is. If we set these aside, and make the simplifying assumption that a "variable," for the purposes of the BIJECTION PRINCIPLE, is a trace, then the BIJECTION PRINCIPLE can be stated as (103).

(103) **BIJECTION PRINCIPLE**

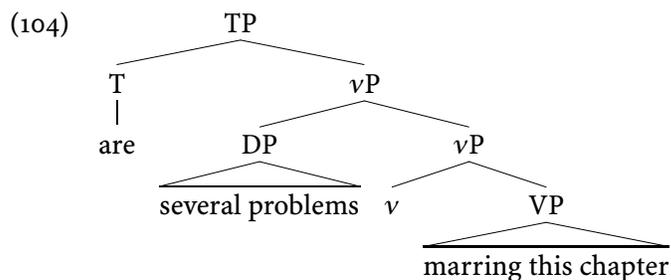
There is a one-to-one correspondence between operators in  $\bar{A}$  positions and variables.

In contexts where SHARING is not triggered, this will prevent a wh-phrase from having two traces. But because coordination triggers SHARING, the BIJECTION PRINCIPLE will be evaluated for the whole coordination by checking it in each conjunct individually. As a consequence, the BIJECTION PRINCIPLE allows, and indeed forces, as many variables as there are conjuncts.

With this background established, let's see how SHARING is responsible for licensing the unusual placement of subjects in (95) and, as a consequence, trapping Gapping into coordination environments.

*Licensing the surface position of subjects*

When a subject is introduced in its underlying position — adjoined to *vP*, as in (104) below — it is capable in English of surfacing in one of two ways.<sup>21</sup> It may



adjoin to TP, yielding (105a), or the expletive *there* may adjoin to TP, yielding (105b).

<sup>21</sup> This representation abstracts from the movement of auxiliary *be* from its underlying position to  $T^0$ , and suppresses various other irrelevant details.

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- (105) a. Several problems are marring this chapter.  
b. There are several problems marring this chapter.

The second outcome is heavily constrained in English, and arises only when the subject belongs to a certain semantic class and the verbal complex is of a particular sort. Because these constraints appear to vary considerably across languages, typically making the corresponding outcomes in (105) more available in other languages, I will assume that they are at least partly independent of the principles that allow (104) to have the two outcomes in (105), and screen them off from our discussion here.

In both outcomes, the Case that the subject bears is determined by T, the licenser of nominative Case in English. This licensing of Case can span long distances, as in (106) where the finite T in the root clause licenses nominative on the embedded subject.

- (106) There are likely to be several problems marring this chapter.

But it cannot span arbitrary distances. It cannot, for instance, license nominative Case on the object in (105) or (106), nor can it license nominative into certain sorts of clauses, as in (107).

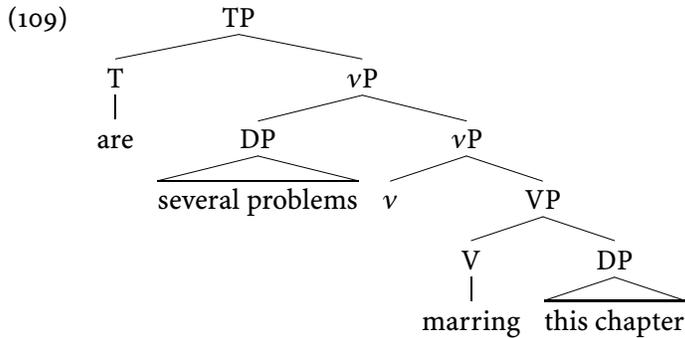
- (107) \*There are possible to be several problems marring this chapter.

Chomsky (2000, 2001) argues that we conceive of this situation as involving nominative Case assignment by (finite) T to a DP it c-commands. He then defines islands — he calls them “phases” — that block Case assignment. Following this line of thinking, the mechanism for Case assignment can be described with (108).

- (108) **ASSIGN CASE**  
A Case assigner,  $\alpha$ , licenses its Case on a DP  $\beta$  just in case  $\alpha$  c-commands  $\beta$  and there is no phase all of whose segments dominate  $\beta$  but not  $\alpha$ .

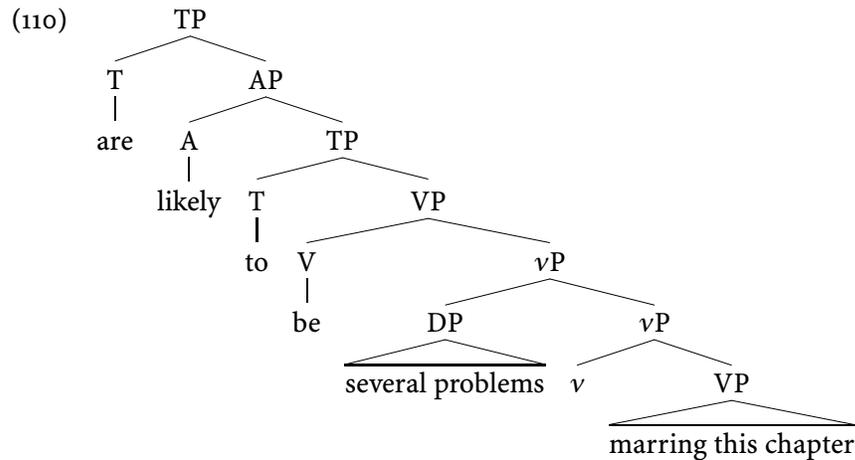
The requirement in (108) that phases cannot completely dominate the Case receiving DP is meant to allow a DP within a phase to be accessible to a Case assigner just in case it is at the “edge” of the phase. Chomsky states this more directly, letting terms that are at the left edge of a phase be accessible to Case assigners outside the phase. Phases are  $vP$  and CP, Chomsky suggests, accounting for the pattern of cases in (105)-(107).

Let’s run through these cases to see how the system works. In (105b), the parse at which the Case assignment procedure is satisfied is (109). Because *this chapter* is dominated by both segments of the  $vP$  projection, it cannot have a Case that is licensed by  $T^0$ . By contrast, *several problems* has only one segment of  $vP$  dominating it, and so it is not wholly contained within this phase and can bear a Case



licensed by  $T^0$ . For this reason, at least partly, *several problems* is nominative and *this chapter* is not.<sup>22</sup>

If we assume that  $vP$  is present only when an external  $\theta$ -role is supported, then (106) will have the representation in (110) below. As with (109), the DP *this chapter*



is separated from finite  $T^0$  by a phase:  $vP$ . By contrast, *several chapters* is dominated by only one of the segments of  $vP$ , and, again as in (109), is accessible to finite  $T^0$ . What's crucial about this case, then, is that embedding *several problems* into a complement clause has not buried it within a phase.

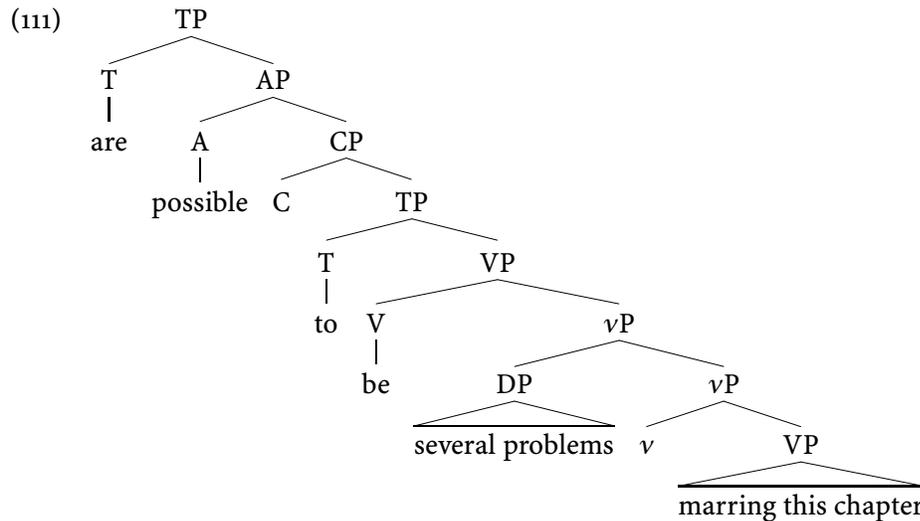
This does happen in (107), however, and is why the result is ungrammatical. Although *possible* is like *likely* in not invoking an external  $\theta$ -role assigner, it does

<sup>22</sup> *this chapter* may fail to get nominative Case here because of an intervention sort of constraint as well — one that would block Case assignment by  $T^0$  across *several problems*. See Holmberg (2002).

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select a CP as clausal complement. The representation that (107) has, then, is (111). Because of the presence of the CP in this representation, *several problems* is sepa-



rated from finite  $T^0$  by a phase, and the Nominative Case it bears is not licensed. Because DPs must bear a licensed Case, this representation is blocked.

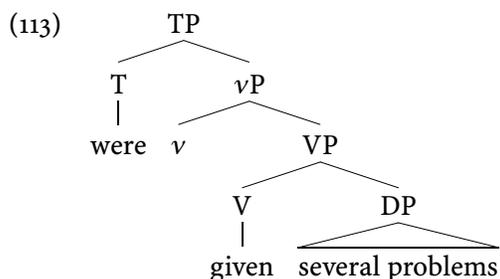
Let's consider one final situation of Case assignment before returning to explain the other relevant property of (105). This final case involves the passive construction. In this scenario, the object may bear Nominative Case, but must migrate to an edge of the verb phrase to do so.

- (112)
- a. There were several explanations given to the reader.
  - b. ? There were given to the reader several explanations.
  - c. \* There were given several explanations to the reader.

Under the assumption that the passive participle is a phase, this is explained by (108).<sup>23</sup> With this assumption, (112c) has the representation in (113) on the next page. This is ungrammatical because *several problems* is separated from  $T^0$  by  $vP$ . As a consequence it must adjoin, either to the left or to the right, of  $vP$ , thereby bringing it close enough to  $T^0$  to have its Case licensed.

ASSIGN CASE, then, is responsible for fixing the proximity of Case assigner and Case bearer. It plays the role of ensuring that Nominative subjects are not too distant from finite  $T^0$ . It alone is responsible for the position of the subject in situations

<sup>23</sup> See Holmberg (2002). It's conceivable that the passive participle qualifies as a  $vP$  as it licenses an external  $\theta$ -role: see Baker, Johnson, and Roberts (1989) for arguments to this conclusion.



like (105b), where the subject surfaces to the right of the term that licenses its Case. Moreover, the locality condition on ASSIGN CASE has the effect of driving a term inside that phase to its edge, if the Case assigner it is dependent on lies outside the phase. This effect plays an important role in what follows.

Let's consider next outcome (105a), in which the subject surfaces adjoined to the TP whose head determines its Case. Chomsky relates this outcome to the requirement that certain sorts of clauses in English always surface with something overt in their subject position. This requirement is also thought to be why in (105b), there is an expletive *there* obligatorily present. Connecting these phenomena in this way has a long history, and consequently, many ways of being expressed. For our purposes, we can rely on something purely descriptive; something along the lines of (114) will do.

(114) **THE EPP**<sup>24</sup>

The surface realization of TP must include a YP left-adjoined to it, where YP is either an expletive or the phrase bearing the Case determined by the head of that TP.

The EPP is therefore satisfied in (105a) because the DP that bears the nominative Case assigned by  $T^0$  has moved and adjoined to the left of that TP.

Having sketched out how the surface position of subjects is normally determined for English sentences, let's now examine how SHARING affects the position of subjects in contexts of coordination.

*Subjects in coordinations*

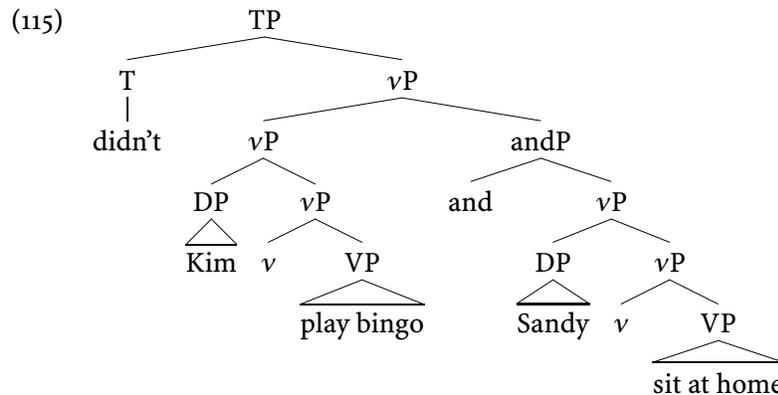
If  $T^0$  assigns its Case to subjects that it c-commands, then SHARING will allow Case to be assigned from a  $T^0$  that lies outside a coordination into each of the conjuncts. This is how the subject of the second conjunct in the parse we are entertaining for

<sup>24</sup> Named after the EXTENDED PROJECTION PRINCIPLE of *Lectures on Government and Binding*.

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Gapping structures gets its Case and is licensed in its position. The representation relevant for assigning Nominative Case to the subjects in (95), for instance, would be (115) below. If the parses we are entertaining are correct for these sorts of Gap-



ping constructions, then we can see the subjects of both conjuncts surface in the positions indicated in (115) when the conditions for satisfying the EPP with an expletive are met. An example of this might be (116) whose surface parse would be (117) on the next page.<sup>25</sup>

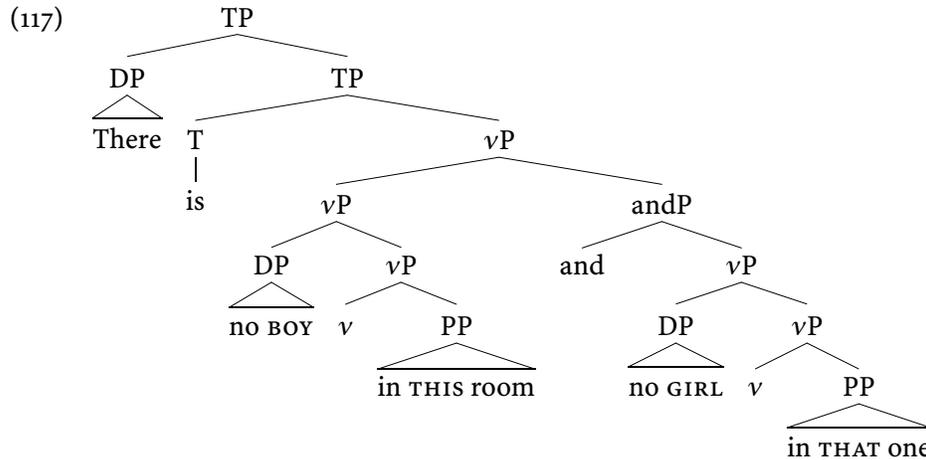
(116) There is no boy in this room and no girl in that one.

Some evidence that these parses are on the right track derives from the observation that, as (117) predicts, the subject of the left conjunct in these sorts of cases does not have scope over the conjunction. This can be deduced from the observation that (118b) is worse than (118a).

- (118) a. No boy<sub>1</sub> is in THIS room and his<sub>1</sub> mother in the OTHER.  
 b. \* There is no boy<sub>1</sub> in THIS room and his<sub>1</sub> mother in the OTHER.

One final environment in which SHARING's effects on Case assignment are probably visible involves constructions in which accusative Case is assigned to the subject of an embedded clause. The syntax of accusative Case assignment is presently under construction, with many factors apparently coming together. There is a relationship between accusative Case and so-called "object agreement" that encourages the view that these two relations should be unified. If agreement is mediated by way of a functional head dedicated to that task, as in the Pollockian model adopted here, it would be a step in this direction to credit the "accusative" relation with a

<sup>25</sup> The parse in (117) takes many shortcuts, doing violence both to the structure of small clauses and to the syntax of auxiliary verbs.



similarly dedicated functional head; this is the direction that xxx and yyy pursue. There is also a relation between accusative Case and the external  $\theta$ -role, that is expressed in Burzio's Generalization.<sup>26</sup> Chomsky (1995) suggests capturing this relation by equating the external  $\beta$ -role assigner,  $v$ , with functional head that assigns accusative Case. And, finally, there is a relationship between accusative Case and the aktionsart/aspect of the VP; see ?, ?, ? among much other work. This connection supports the view that there is a functional head responsible for accusative Case assignment that influences the aktionsart, or aspectual, interpretation of clauses. It is possible to suspend a commitment to the various directions these considerations recommend, and since there is nothing in the project we are pursuing that interacts centrally with the syntax of accusative Case assignment, I will try to steer a course that is free of such a commitment. Let's assume that accusative Case is assigned by a functional head,  $\mu$ .<sup>27</sup>

On this assumption, an example like (119) plausibly fits into a parse like that in (120) on the following page.

(119) I made out Betsy to be honest and Liz to be charming.

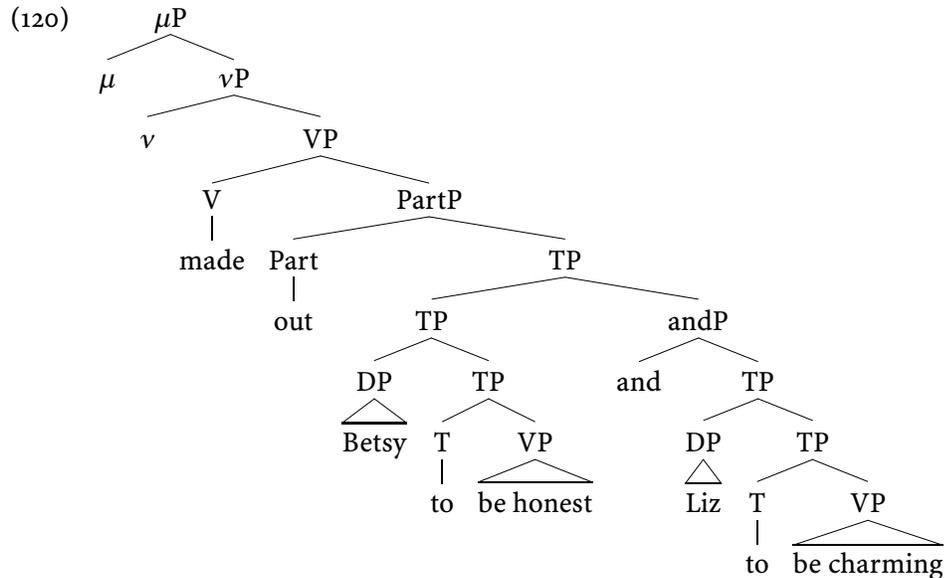
I've simplified in this parse the representation that the "particle construction," or "phrasal verb," gets; but on virtually all accounts of this construction there is a phrase headed by the particle that embeds the complement of the verb. The usefulness of this construction here is that it indicates that the subjects of the embedded

<sup>26</sup> See Burzio (1986).

<sup>27</sup> See Johnson (1991), Lasnik and Saito (1991), Runner (1995), Koizumi (1995), Lasnik (2002) among many others.

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infinitives remain within their clauses on the surface. If so, there must be a mechanism for sharing the Accusative Case across the coördinates so that it can reach into the Specifier of each. The parse in (120) would allow ASSIGN CASE to do this.

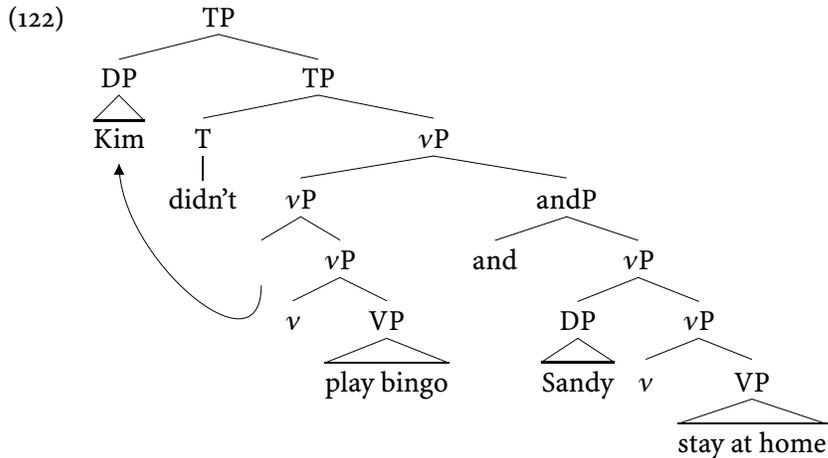
Therefore, because coördinations invoke SHARING, ASSIGN CASE is capable of licensing a subject in the right conjunct of a Gapping construction under the parses we are entertaining. Let us adopt this as the solution to the problem posed by the surface position of the subject in the right, and subsequent, conjuncts then. This solution, however, does create a mystery. As Siegel notes, the subjects of some Gapping constructions can appear, rather surprisingly, in the Accusative Case; both of the cases in (121), for instance, are okay.

- (121) a. She ate the beans, and he ~~ate~~ the rice.  
 b. She ate the beans, and him ~~ate~~ the rice.

Zoerner (1995) argues from these facts that the Case on the subject of the second conjunct is assigned by the coördinator itself, noting that the coördinator is plausibly responsible for the accusative case in examples like *You and me will go far*. On the proposal here, however, the relative grammaticality of (121b) is not explained.<sup>28</sup>

<sup>28</sup> I suspect that if the proposal here is correct, the solution to this phenomenon will come from a better understanding of the relationship between Case licensing and the morphological expression of that Case, in particular in context of “default” Case. See Schütze (1999).

Let's consider next how the subject associated with the left conjunct finds its surface position under the parse we are considering. I suggest that, as in the normal case, the subject of the first conjunct in these situations simply moves to adjoin to the higher TP in satisfaction of the EPP. This will yield a representation like (122), which appears to violate the Coördinate Structure Constraint. To understand how



this outcome is possible, then, amounts to understanding why this parse does not violate the Coördinate Structure Constraint.

The sorts of processes that the Coördinate Structure Constraint is typically illustrated with involve instances of  $\bar{A}$  Movement. In fact, it is very difficult to find compelling evidence that the Coördinate Structure Constraint applies to A Movement.<sup>29</sup> Further, there are examples such as (123), in which the subject of the first embedded infinitive seems to have moved in violation of the Coördinate Structure Constraint in the way that the particle construction permits of its Accusative Case-marked terms.

(123) Liz made Mason<sub>1</sub> out [TP [TP  $t_1$  to be intelligent] and [TP Sarah to be kind]].

If A Movement is, in general, not subject to the Coördinate Structure Constraint, then the surface parse in (122) is fully expected.

Why should A Movement differ from  $\bar{A}$  Movement with respect to the Coördinate Structure Constraint? Lin (2001), who also embraces the parse in (122) for Gapping constructions, argues for an interesting proposal in this regard. She follows Ruys (1992) in taking the Coördinate Structure Constraint to be a consequence of SHARING, and, in these contexts, specifically the way in which SHARING judges

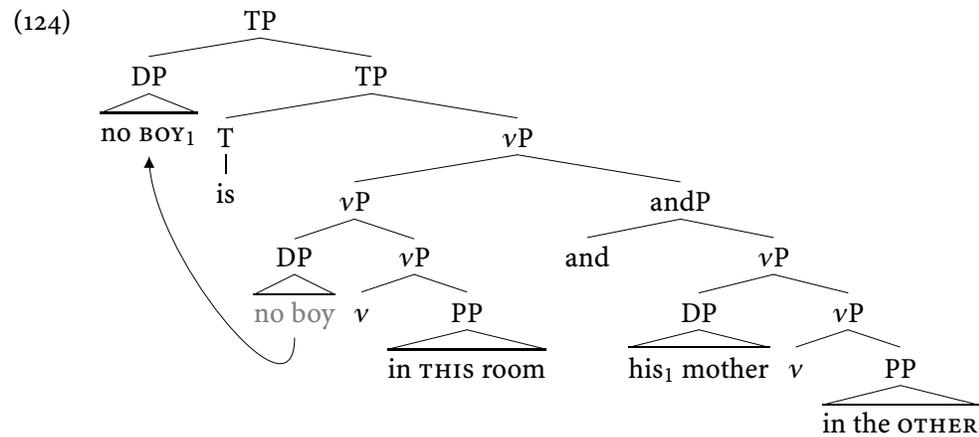
<sup>29</sup> See Barton and Grimshaw (1992), McNally (1992) and Lin (2002) for some discussion.

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the relationship between quantificational terms and the variables they bind. We can understand this in terms of the BIJECTION PRINCIPLE's interaction with SHARING as follows. For the BIJECTION PRINCIPLE to apply correctly under SHARING, a quantificational term that has moved out of a coördination will either have to find an  $\bar{A}$  position from which it binds variables in parallel positions in each conjunct, or it will have to avoid being interpreted outside the conjunction, where SHARING will be evoked.

In a situation like (118a), then, where the subject has scope over the coördination, we should countenance an LF representation like that in (124) below. If we treat the



highest *no boy* as susceptible to the BIJECTION PRINCIPLE, it will combine with the SHARING to require that *no boy* bind a variable in each of the conjuncts. Because the lowest copy can be interpreted as a variable, it can satisfy this requirement for the first conjunct. In the second conjunct, Lin suggests that the bound pronoun *his* acts to satisfy this requirement. Here, then, is the relevant way in which A movement and  $\bar{A}$  movement differ: the BIJECTION PRINCIPLE allows a wider range of terms to count as variables for terms in A positions than it does for terms in  $\bar{A}$  positions.

In a situation like (122), by contrast, where there is no variable of any sort in the second conjunct, the BIJECTION PRINCIPLE must be satisfied in some other way. Here, Lin argues that the subject which has raised out of the first conjunct must be semantically interpreted back in that conjunct, thereby circumventing the BIJECTION PRINCIPLE altogether. Indeed, in a certain range of cases where the scope of the subject belonging to the first conjunct can be determined, it does seem to obligatorily fall within the coördination in these circumstances. For example, *a linguist* strongly favors being interpreted within the scope of negation in (125a), and doesn't

allow for the wider scope reading it may have in (125b).

- (125) a. A linguist isn't in Bartlett and a philosopher in South College.  
 b. A linguist isn't in Bartlett.

One way of modeling this is to let the interpretation procedure for copies ignore the spoken copy and instead interpret the silent one. This is sometimes called “total reconstruction,” and I will formulate it descriptively with (126).

- (126) TOTAL RECONSTRUCTION  
 Do not give the spoken copy a denotation, and interpret instead exactly one of the unspoken copies.

The availability of total reconstruction, then, is another way in which the BIJECTION PRINCIPLE can be overcome in these contexts.

What this discussion reveals is that a difference between  $A$  and  $\bar{A}$  movement concerns the availability of total reconstruction: only terms in  $A$  positions can be totally reconstructed,<sup>30</sup> and thereby avoid the ravages of the BIJECTION PRINCIPLE.

While there is much work left, not only in filling in the details but also in simply substantiating this interpretation of the Coördinate Structure Constraint, let's adopt this approach here. In the  $A$  versus  $\bar{A}$  movement contexts, then, it boils down to different ways that terms in  $A$  and  $\bar{A}$  positions are interpreted, and the consequences this has for SHARING. The general consequence will be that terms that move into  $A$  positions are not subject to the Coördinate Structure Constraint.

This means that some other method must be found for blocking cases such as (127), in which an argument  $A$  moves from the second conjunct.

- (127) a. \* Sandy<sub>1</sub> didn't [ [ Kim play bingo] and [  $t_1$  stay at home]].  
 b. \* Liz made Sarah<sub>1</sub> out [[ Mason to be intelligent] and [  $t_1$  to be kind]].

One possibility is to rely on a constraint that minimizes the distance that is traversed by movement operations in satisfying a constraint.<sup>31</sup> In the cases at hand, it is the EPP that is being satisfied by moving a Nominative Case marked DP; if the DP moved comes from the first conjunct rather than the second, then the distance traversed will be less, in the sense that fewer phrases will be escaped from. Chomsky (1998, 2001) makes use of a constraint of this sort, and it shows up in one form

<sup>30</sup> See Sauerland and Elbourne (2002) for an interpretation of reconstruction in  $A$  movement contexts with this consequence.

<sup>31</sup> This solution to ungrammaticality of (127) was suggested to me by many people; perhaps Alan Munn, who uses similar ideas in his dissertation, was the first. It should be noted that formulating this solution under the binary-branching representation of coördination that we have adopted is considerably easier than under a “flatter” representation of coördinations. See Munn (1993) for an extended argument on behalf of these representations.

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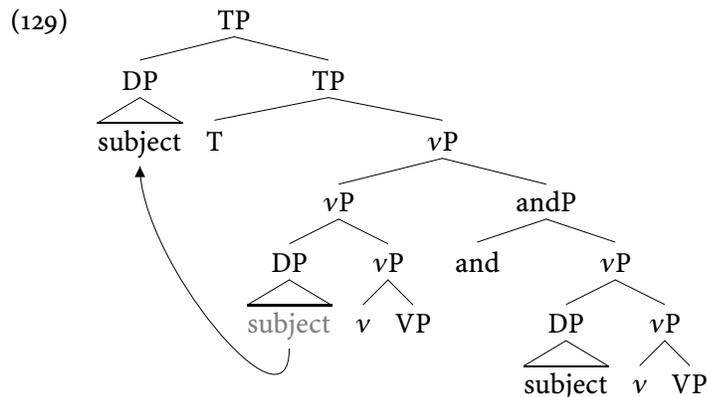
or another in quite a variety of places in the literature.<sup>32</sup> The constraint needs to be stated over a set of terminals, if it is not to block the strategy of satisfying the EPP that involves an expletive, and it would appear to need to be transderivational. I'll frame it as (128).

(128) **SHORTEST**

Let  $(\mathcal{L}, \mathcal{P})$  be a set of lexical items  $\mathcal{L}$  used in building a phrase marker  $\mathcal{P}$ . For each constraint  $\mathcal{C}$  that is satisfied by moving  $\alpha$  in  $\mathcal{P}$ , choose the derivation that leads from  $(\mathcal{L}, \mathcal{P})$  to a satisfaction of  $\mathcal{C}$  that minimizes the number of phrases  $\alpha$  moves out of.

Given the asymmetric parses we have credited coördinations with, movement out of the second (or subsequent) conjuncts will be less favored than movement out of the first conjunct because they will be more deeply embedded.

If these various steps are successful, then they have the effect of letting the general principles which fix the surface position of subjects put the subjects of conjoined  $v$ Ps into the positions indicated in (129) below. What's exceptional about



this schema is that it puts two subjects in the same clause, both related to the same  $T^0$  licensing Case. This is possible only because of SHARING, and as a result, only arises in coördinations. In this way, then, we have accounted for why Gapping of  $T^0$  occurs only in coördinations. At the same time, the odd scope properties of these Gapping constructions are explained, as are many of the other properties we have seen to hold of Gapping constructions generally.

For instance, the fact that neither the Gapped term, nor its antecedent, may be in an embedded clause emerges from the fact that the “Gapped” item is nothing

<sup>32</sup> See Richards (1997) and Fox (2000), and references cited therein for some examples.

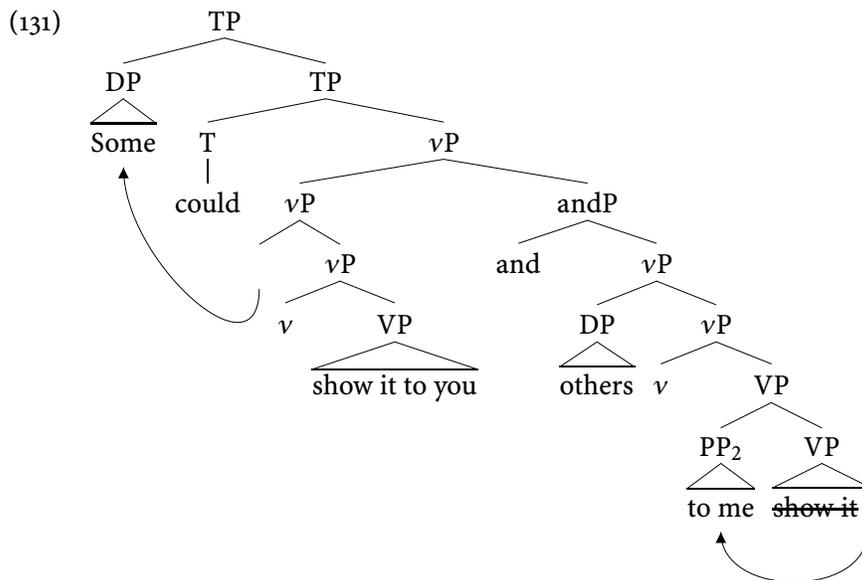
more than a term that embeds the coördination. For the very same reason, it follows that a Gapped term must be in a “clause” that is coördinated with the very clause that holds the antecedent term.

But these results have been derived for only the simplest of cases: ones where just  $T^0$  is Gapped. The considerable challenge of spreading this result to complex gaps remains.

### 1.3.2 Predicate shift

What is needed is some way of letting phrases Gap. A tempting idea is to combine Pseudogapping with the process just outlined for Gapping  $T^0$ . On this view, complex Gaps would be an amalgam of two independent processes. Pseudogapping elides, say, all of a VP except whatever has Scrambled out of it and the finite auxiliary or modal, sitting in  $T^0$ , appears to elide by way of the skewed coordinations we’ve just examined. The fact that complex Gaps, like simple ones, have a narrower distribution than Pseudogapping would then derive from the part of this amalgam that rids the second conjunct of  $T^0$ . For example, a case such as (130) could have a representation like that in (131) below — assuming that *to me* Scrambles by adjoining to VP.

(130) Some could show it to you and others to me.



Given the existence of Pseudogapping, it is expected that it should be able to combine with  $T^0$  Gapping to produce the complex Gaps we are in need of, and so Oc-

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cam's Razor recommends this as the first hypothesis. David Pesetsky also recommends it.

### 1.3.3 Complex Gaps don't employ Pseudogapping

There are a variety of difficulties in crediting all complex Gaps to this source, however, and I won't pursue this direction as a consequence. Let me begin by listing these difficulties.

One involves squaring the conditions on Pseudogapping to the coordination environments of complex Gaps. Pseudogapping, like VP Ellipsis, requires that the constituent that is elided be governed by a lexical item in  $T^0$ . This is what is responsible for the contrast in (132).

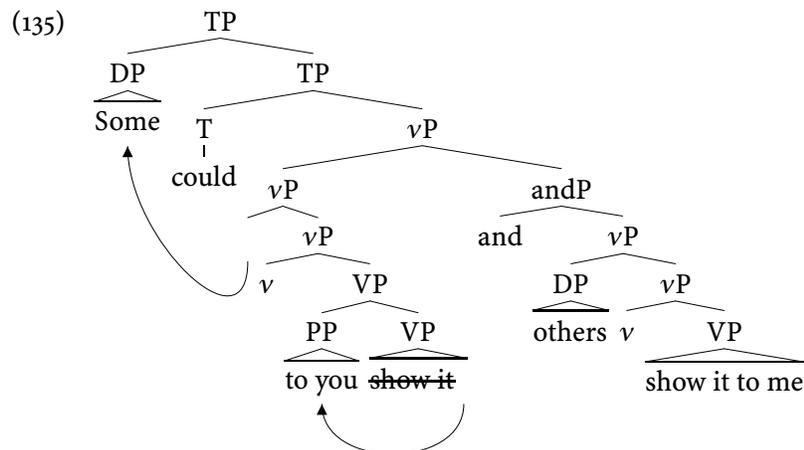
- (132) a. Philip reads things quickly before Mikey does  $\Delta$  thoroughly.  
 b. \* Philip reads things quickly before Mikey  $\Delta$  thoroughly.

In general, then, Pseudogapping is not possible in clauses in which there is only a main verb and no accompanying material in  $T^0$ . But this limitation is not found in complex Gaps:

- (133) Philip reads things quickly and Mikey ~~reads things~~ thoroughly.

Moreover, it is not clear that this condition can be satisfied in the contexts of complex Gaps even when there is material in  $T^0$ . If it could be, we might expect to find examples such as (134), whose parse, parallel to (131), would be (135) below.

- (134) \*Some could to you and others show it to me.



There is no obvious reason why the modal in  $T^0$  should be able to license Pseudogapping in the second conjunct, as alleged for (131), but not in the first conjunct, as

in (135). It would be safest to conclude that  $T^0$  is not in the right configuration with the conjoined vPs to license ellipsis in them, and I will adopt this assumption in what follows.

But let's look at the other difficulties for the Pseudogapping account of complex gaps first.

If complex gaps arise by combining the otherwise independent Pseudogapping with skewed coordinations, then we should expect to find in situations where Pseudogapping is not permitted only simple Gaps. In fact, Pseudogapping is a very fragile construction and is relatively rare among the world's languages. To my knowledge, there is no cross-linguistic correlation of the sort expected. In particular, it does not seem to be the case that languages which do not have Pseudogapping cannot have complex Gaps. German, for instance, does not tolerate Pseudogaps, as (136) demonstrates, but does allow for complex Gaps, as in (137).

- (136) \* Sally hat Kumquats gegessen weil Dieter Natto hat.  
 Sally has kumquats eaten since Dieter natto has  
 'Sally has eaten kumquats since Dieter has natto.'

- (137) Sally hat es dem Peter gegeben und Dieter dem Hans.  
 Sally has it the Peter gegeben and Dieter the Hans  
 'Sally has given it to Peter and Dieter to Hans.'

Related to this problem is the observation made in section ?? that Gaps can include projections of adjectives, but VP ellipsis and Pseudogapping can't. We have minimal pairs, then, like (138).

- (138) a. I made Sal fond of it on Tuesday and Holly ~~fond of it~~ on Wednesday.  
 b. \* I made Sal be fond of it on Tuesday since you made Holly  $\Delta$  on Wednesday.

Again, complex Gaps seem capable of existing in environments where Pseudogapping is not.

Many of the differences we ran through between Pseudogapping and Gapping can be accommodated by the thesis that complex Gaps are Pseudogapping combined with a coordination that puts  $T^0$  outside the conjunction. The surprising scope facts, for instance, and the restriction that Gapping has to coordinations, for instance, trace back to the placement of  $T^0$  in the mix. But not all differences between Pseudogapping and Gapping are explained, and these still stand in the way of collapsing them.

One of these, recall, is that Gapping is capable of affecting a slightly wider class of strings than is Pseudogapping. For example, Gapping can remove a verb and the

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subject of a small clause that that verb selects. Pseudogapping, however, can't do this, and so we have the contrast in (139).

- (139) a. Some found Mittie clever at pictures and others ~~found Mittie~~ good with children.  
b. \* I found Mittie clever at pictures while Sam did  $\Delta$  good with children.

Another is that the identity conditions on what can serve as an antecedent are slightly different for Pseudogapping and Gapping. Recall that while Gapping allows for the strict/sloppy identity phenomena characteristic of anaphora, and also the "Missing Antecedent" phenomenon, it does not allow for the same freedom of divergence from the syntactic form of the antecedent that Pseudogapping does. Pseudogapping, recall, can elide a VP whose semantic content matches that of an NP, for instance, and Gapping can't do this. Nor can Gapping remove an active verb when the antecedent is a passive version of that verb, though Pseudogapping is capable of this. (See (88) and (89) on page ??.) Pseudogapping seems to match the phrases it affects with antecedents in a more syntax-independent way than does Gapping, and this is unexpected, of course, if complex Gaps are just Pseudogaps.

These differences all speak against using Pseudogapping in these contexts. But there is a subtle difference between simple and complex Gaps which suggests that we also do not want to use the same method of removing  $T^0$  from the clause with the Gap. This difference, in other words, undermines the "skewed coördination" part of the "skewed coördination" + "Pseudogapping" amalgam that is a potential source of complex Gaps. The difference concerns the scope of a modal that Gapping has affected. Siegel (1987) discovered that when a modal is part of a complex Gap it is not required to have the coördination in its scope, as it is when it is part of a simple Gap. Her examples illustrating this are (140).

- (140) a. Ward can't eat caviar and his guest eat dried beans.  
b. Ward can't eat caviar and his guest dried beans.

(Siegel 1987, (2) & (3):53)

As we've seen, *can't* in (140a) necessarily scopes over the coördination; this sentence denies the possibility of conjoined propositions "Ward eat caviar" and "his guest eat dried beans."<sup>33</sup> By contrast, (140b) is ambiguous, and allows a reading in which

<sup>33</sup> In fact, Siegel (1987 footnote 2, p. 71) suggests that this sentence also allows for a "narrow scope" reading for *can't* if it is read with a strong pause between *his guest* and *eat dried beans*. (The "narrow scope" reading is one that would make this example synonymous with "Ward can't eat caviar and his guest can't eat dried beans.") Thus, she suggests that this sentence becomes ambiguous when it has intonation appropriate for Gapping — she maintains that Gapping is a process different from that which normally produces (140a), and has different scope properties as a result. I have not been able to convince myself that the narrow scope reading is in fact available in this sentence under any intonation, and the judgements among my consultants seem quite unstable. I will precede as if this example is unambiguous.

*can't* is distributed across both conjuncts. In addition to being synonymous with (140a), then, (140b) can also have a meaning close to “Ward can’t eat caviar and his guest can’t eat dried beans.” The same sort of contrast can be illustrated with the scope of non-negated modals, though here the judgements are trickier. Oehrle (1987) offers (141a), which has the interpretation in (141b), as an illustration.

- (141) a. Balya might live in Omsk and Slava in Tomsk.  
 b. Balya might live in Omsk and Slava might live in Tomsk.  
 (Oehrle 1987, p. 232)

Or consider the pair in (142).<sup>34</sup>

- (142) a. Mittie must remove the engine from my car and Sam drive it down the street.  
 b. Mittie must remove the engine from my car and Sam the steering wheel.

For both of these examples, I think, what would be the most natural reading is one in which *must* is interpreted in each conjunct. But, in fact, that reading seems to be possible only in (142b); (142a) only allows a bizarre interpretation, one in which a kind of miracle is described. So, (142a) has only the interpretation in (143), while (142b) has both the readings in (144).

- (143)  $\square [ [ \text{Mittie remove the engine from my car} ] \wedge [ \text{Sam drive it down the street} ] ]$   
 (144) a.  $\square [ [ \text{Mittie remove the engine from my car} ] \wedge [ \text{Sam remove the steering wheel} ] ]$   
 b.  $[ \square [ \text{Mittie remove the engine from my car} ] ] \wedge [ \square [ \text{Sam remove the steering wheel} ] ]$

Siegel concludes from these facts that simple Gaps involving  $T^0$  are not instances of Gapping, and that Gapping does not make use of the skewed coordinations described in the previous section. Given the complete match otherwise found between  $T^0$  “Gapping” and every other instance of Gapping, however, I don’t think we should abandon the hypothesis that they have the same source. Note in particular that complex Gaps *do* have the emblematic wide-scope reading for the modal that simple Gaps have, and the exceptional wide-scope of the subject of the first conjunct is also found in both kinds of constructions. If the explanation for this behavior comes from skewing the coordinations so that  $T^0$ , and the first subject, are outside them, then we will need this arrangement for complex Gaps as well.

<sup>34</sup> My thanks to Barry Schein for help in navigating these sorts of examples.

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What these facts teach us is that something else is going on in complex Gaps that gives the contents of  $T^0$  the ability to be construed within the coördinates. Simply putting Pseudogapping together with skewed coördinations does not deliver this effect.

These are my reasons, then, for not using Pseudogapping in deriving complex Gaps. In fact, as foreshadowed above, I will assume that Pseudogapping is prevented from applying in contexts where the  $T^0$  that would license ellipsis embeds coördinated vPs. Faced with these facts, not everyone has reached this conclusion, however, and there are some able attempts to overcome these difficulties. See in particular Coppock (2001) and Lin (2002).

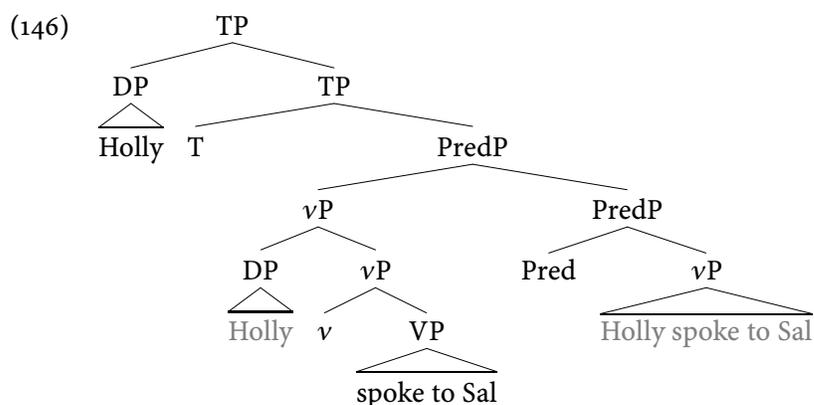
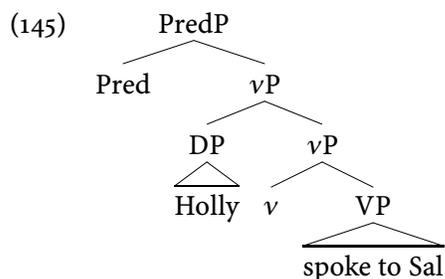
But if this is not the route we shall take, then how do phrases Gap?

### 1.3.4 It's across-the-board movement

The direction I will take is that in contexts of skewed coördinations there becomes apparent a movement operation in English that is otherwise very difficult to detect. I'll call this operation PREDICATE SHIFT, and in the next few pages I will sketch how I propose it works. Essentially, PREDICATE SHIFT moves vPs leftwards. In skewed coördinations, PREDICATE SHIFT can occur in across-the-board fashion, yielding a complex Gap.

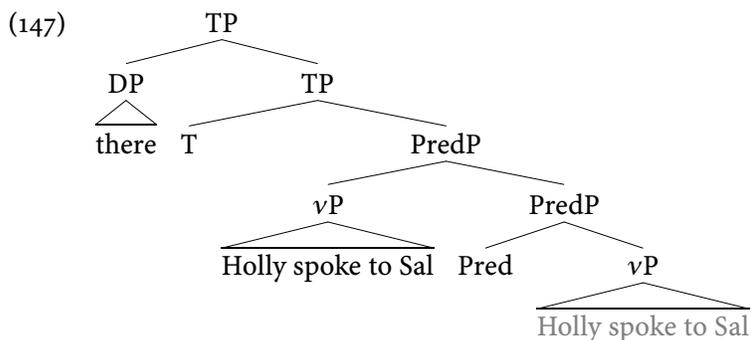
The existence of PREDICATE SHIFT has a variety of precedents. An early antecedent is found in Larson (1988), who analyzes Heavy NP Shift as involving a reanalysis rule that converts a VP into a  $V^0$  and then moves it leftwards. Many of the present versions of PREDICATE SHIFT flow, I believe, from the considerations raised in this paper. It is used by Zwart (1993, 1997), Hinterholz (1999) and Koopman and Szabolcsi (2000) to account for the shape that verbal complexes take in German and Dutch, and in the case of Koopman and Szabolcsi, Hungarian too. Johnson (2002), building on Zwart (1997), argues that it plays a role in certain "broken coördinations" found in German and Dutch. And Kayne (1998) has argued for PREDICATE SHIFT in English, using certain correlations between scope and word-order. (The next chapter examines Kayne's arguments.) Nonetheless, the existence of PREDICATE SHIFT remains controversial, and I do not encourage the reader to take these works as independent corroboration of its existence. Instead, I intend the following account of Gapping to be read as an argument on its behalf.

I suggest that we let PREDICATE SHIFT adjoin vP to the left of a phrase that is selected by  $T^0$ . Following Zwart (1997), let's know this phrase as Predicate Phrase (or, PredP). I cannot tell whether this movement is obligatory or not: let's take the easier-to-disprove position that it is obligatory. The proposal, then, is that a representation like (145) on page ?? is mapped onto a surface form like (146) on page ?. This parse corresponds to the string "Holly spoke to Sal," and is formed by first do-



ing PREDICATE SHIFT and then merging  $T^0$  with PredP, assigning nominative Case to the subject, and, finally, moving that subject into Specifier of TP.

When the subject is assigned Case in its underlying position, and the EPP is satisfied by adjoining an expletive to TP, the parse in (147) is formed from (145).



The representation in (147) corresponds to “There Holly spoke to Sal,” whose ungrammaticality we can take to stem from the language particular conditions on ex-

## 1. Bridging the Gap

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pletive constructions in English. Only (146) (“Holly spoke to Sal”) is a grammatical outcome in this case.

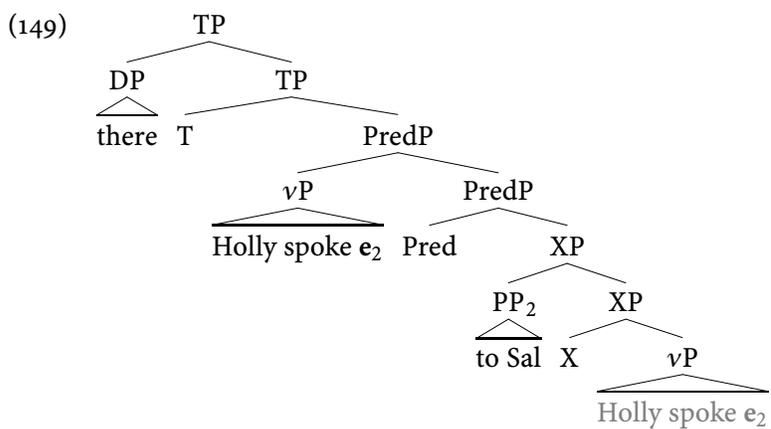
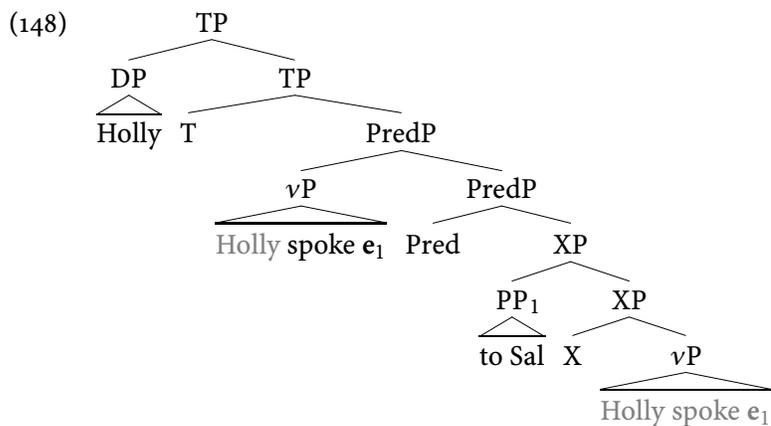
In finding the constituents that Gapping and Pseudogapping affect, we have made central use of Scrambling. The island effects, recall, support the view that movement is responsible for evacuating the remnant out of the constituent which these processes delete. Moreover, the profile of island constraints obeyed seems to match that of Scrambling, as it is found in the verb final Germanic languages. Therefore, if PREDICATE SHIFT is what creates complex Gaps, then Scrambling must be enabled to move terms out of the  $vP$  before PREDICATE SHIFT moves it. Let’s take Scrambling to be, essentially, optional and, when it is short, to involve moving the relocated phrase to the edge of a phrase that immediately dominates  $vP$ .<sup>35</sup> I’ll call this phrase  $XP$ .

Let’s leave open the issue of whether Scrambling is capable of moving phrases to both the left and right edges of  $XP$ . If Scrambling were to move a phrase to the right edge of  $XP$ , we would have a configuration very like that of Heavy NP Shift, under a classical analysis of that process.<sup>36</sup> If Scrambling moves a phrase to the left edge of  $XP$ , as Kayne (1994) argues is always the case, then we have a less tested, and therefore, more dangerous outcome. In what follows, I will parse all instances of Scrambling as if they moved the term leftwards in an effort to root out where this option might falter.

Scrambling, then, when combined with the other processes countenanced here, will produce from (145) either (148) or (149), depending on which strategy of satisfying the EPP is adopted. (In these, and all subsequent representations, I shall adopt the convention of indicating the unpronounced copy of a moved item as a bound variable, i.e., “ $e_n$ ,” when it is inside a larger unpronounced copy.)

<sup>35</sup> An alternative would be to see the Scrambled item as adjoining to  $vP$ , but with the proviso that the  $vP$  thereby formed cannot be PREDICATE SHIFTED.

<sup>36</sup> As, for instance, found in Ross (1967).

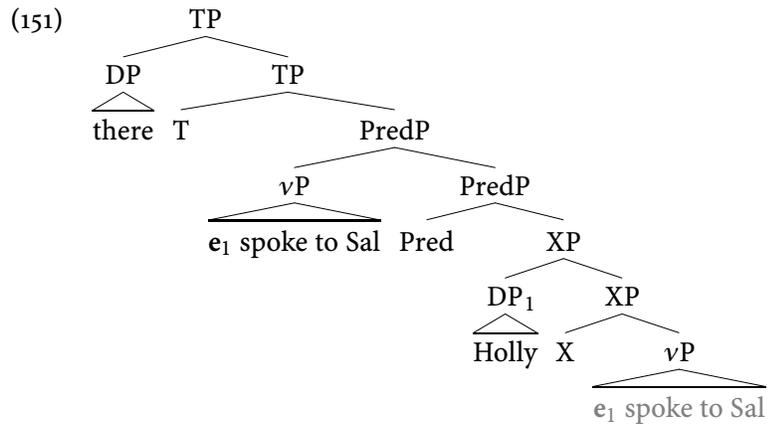
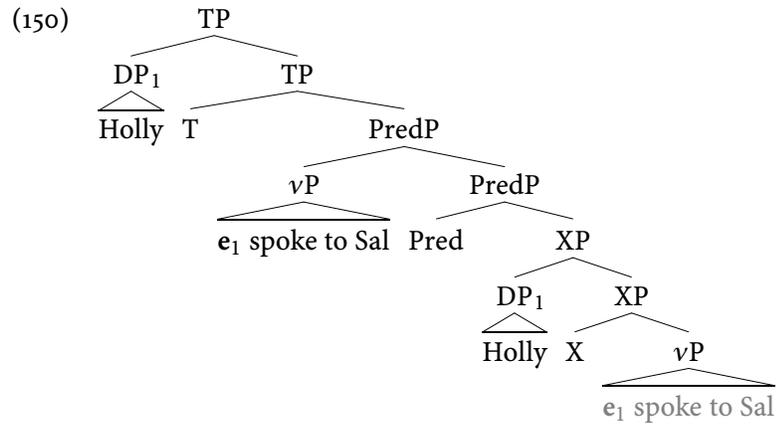


Like (146), (148) corresponds to the string “Holly spoke to Sal.” And like (147), (149) corresponds to “There Holly spoke to Sal,” and is ungrammatical for the same reason.

Consider next the outcomes that arise when the subject Scrambles. When only the subject Scrambles, then one of the representations (150) or (151) arises, depending on which method of satisfying the EPP is taken.

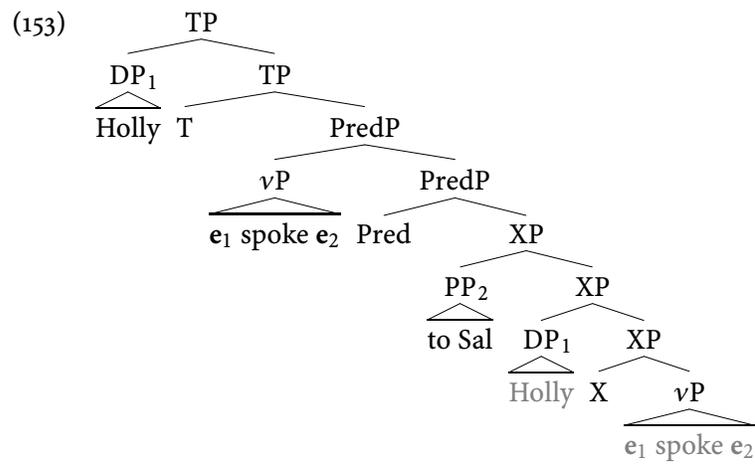
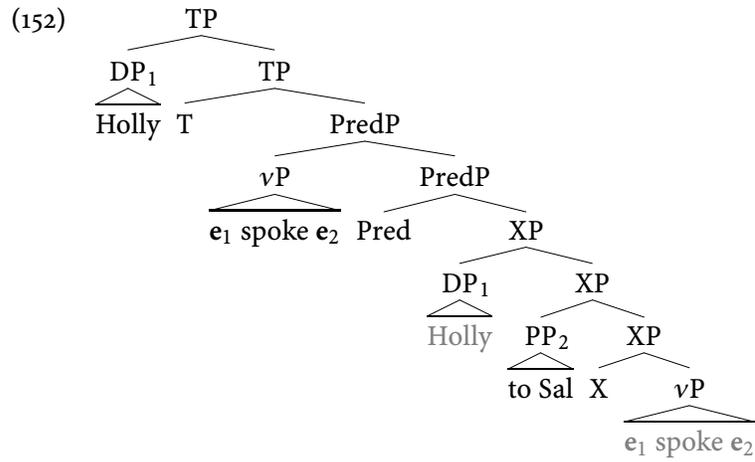
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Like (146) and (148), (150) corresponds to the string “Holly spoke to Sal.” Because there are two potentially “highest” *Holly*’s in (151) — the *Holly* in adjoined to XP and the *Holly* in the higher copy of vP are both not *c*-commanded in this parse — it’s not clear which of them will be pronounced: either “There spoke to Sal Holly” or the ungrammatical “There Holly spoke to Sal” will emerge. As before, we may assume that the ungrammaticality of “There Holly spoke to Sal” traces back to conditions peculiar to the expletive construction in English.

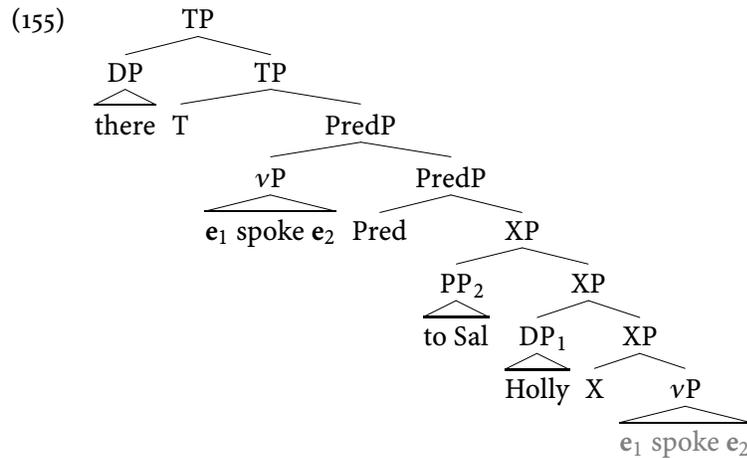
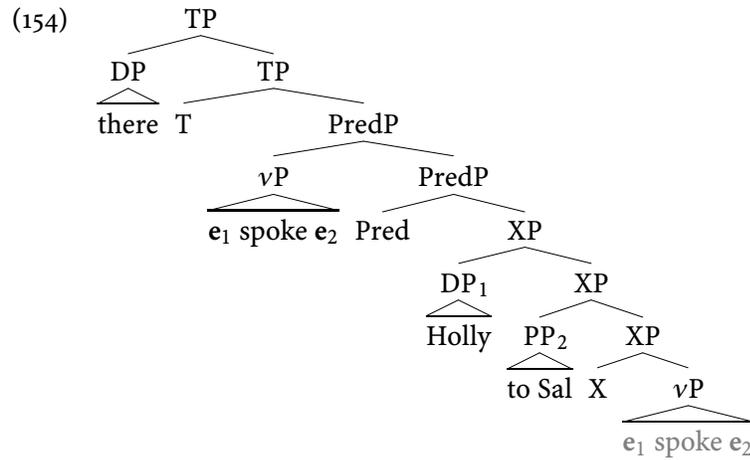
Finally, consider the outcomes that are possible when both subject and object Scramble. When the EPP is satisfied by moving the subject into Specifier of TP, then the surface parse will be either (152) or (153), both corresponding to the string “Holly spoke to Sal.”



When the EPP is satisfied through the expletive, then one of the representations in (154) or (155) arise.

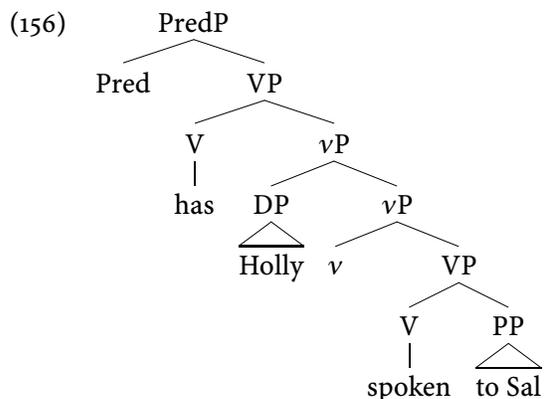
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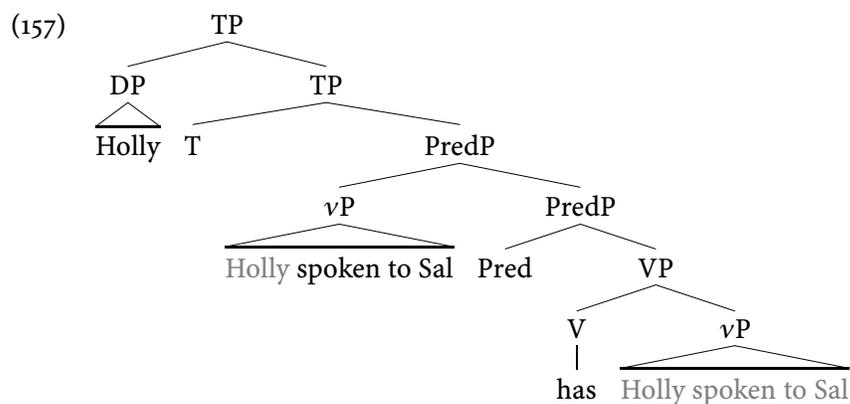


Again, depending on which of the “highest” *Holly*’s gets pronounced in (155), this will correspond to “There spoke to Sal Holly” or “There Holly spoke to Sal.” The second is ungrammatical for the same reason that the identical (149) and (151) are. Similarly, (154) will either give rise, again, to the ungrammatical “There spoke to Sal,” or the very strained “There spoke Holly to Sal.”

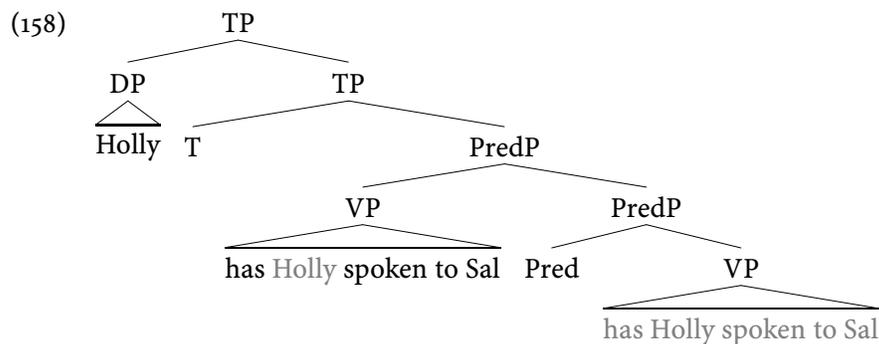
To this point, we have considered scenarios in which *vP* is not included within any other VPs. We should also consider those cases where *vP* is embedded within a VP, say in sentences with auxiliary verbs. Before turning to examine how PREDICATE SHIFT manufactures complex Gaps, let’s investigate this case. The first question to answer is where PredP is relative to VPs that contain *vP*. Anticipating what we will discover once we’ve turned to Gapping, I will place PredP above all VPs, as in (156).



If this is correct, then it is necessary to find a way of preventing PREDICATE SHIFT from producing a surface form like that in (157), since this would wrongly permit sentences such as “Holly spoken to Sal has.”



Instead, PREDICATE SHIFT should move the VP headed by *has* to form (158).



Two changes to the present proposal are required, then. PREDICATE SHIFT must be allowed to move VPs as well as vPs; and it should be constrained so as to affect only

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the highest of its potential targets. What PREDICATE SHIFT can move should be left an open question, so I'll make the first change with (159).<sup>37</sup>

(159) **PREDICATE SHIFT**

Move a PREDICATE to Specifier of PredP.

PREDICATE = {VP, vP, ... }.

That PREDICATE SHIFT only moves the highest of the PREDICATES it can target I will assume flows from a general A-over-A type of locality constraint on movement. An A-over-A style of locality constraint has been posited in a wide variety of contexts, and in current literature is frequently collapsed into a more general constraint that shortens the distance between a probe, triggering a movement operation, and its target. We can do with a formulation like (160).

(160) **SHALLOWEST**

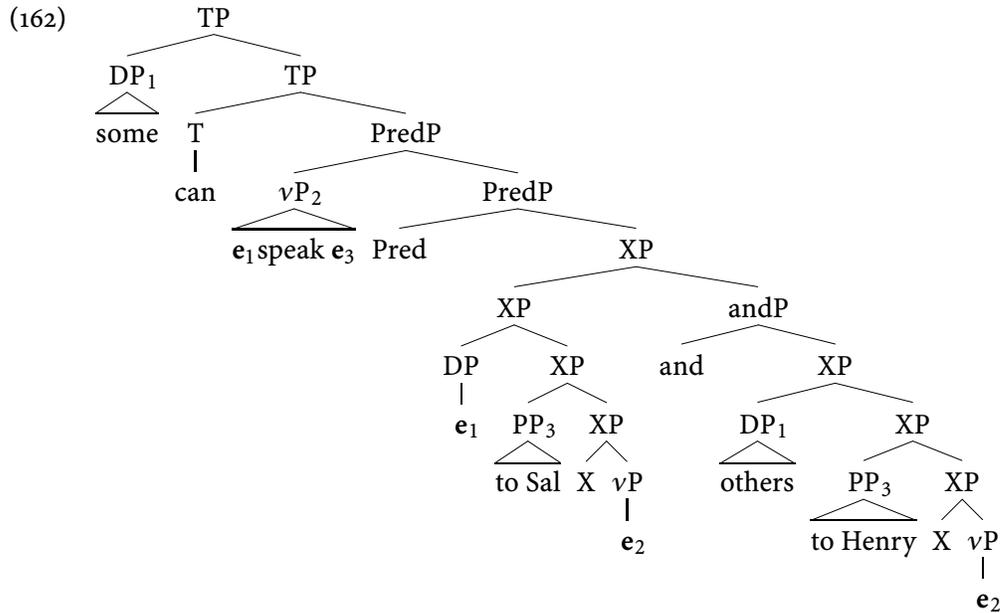
Let  $\alpha$  be a term that triggers movement of a term of type  $\phi$ . Then  $\beta$  can move to  $\alpha$  only if there is no  $\gamma$  of type  $\phi$  that dominates  $\beta$  but not  $\alpha$ .

We are now prepared to examine how PREDICATE SHIFT can manufacture complex Gaps. The relevant feature of skewed coördinations that makes it an environment in which PREDICATE SHIFT manifests itself as a Gap is just that they involve a situation in which  $T^0$  embeds a coördination and the subjects in those coördinated phrases are deployed in the misleading manner described above. Because  $T^0$  embeds the coördination in these contexts, it's possible that the PredP is, like  $T^0$ , also outside the coördination. When PredP is outside the coördination, PREDICATE SHIFT will move the vPs in each coördinate out of the coördination in across-the-board format. Any remnants left in the conjuncts have Scrambled out of the moved vPs. Thus, an example like (161) will have a surface representation like (162) on page ??.

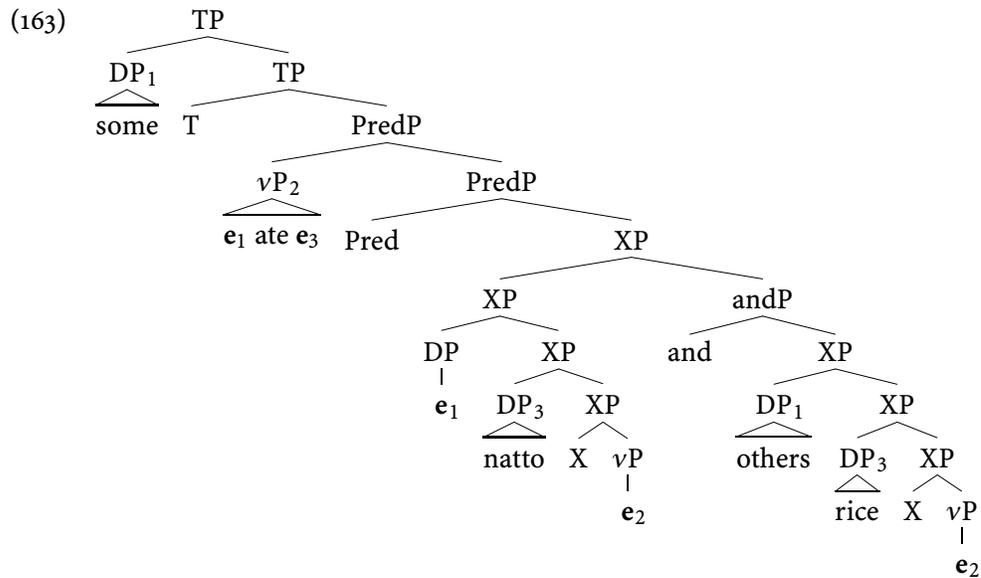
(161) Some can speak to Sal and others ~~can speak~~ to Henry.

(I have represented all the unspoken copies in (162) with “e,” in order to facilitate the readability of this phrase marker. I will resort to this practice wherever I think it aids clarity.) This representation is formed by Scrambling the DPs and PPs in each conjunct out of vP, and then PREDICATE SHIFTING that vP across-the-board. Note that, because across-the-board movement can only affect terms in conjuncts that look identical, it is necessary that the DP and PP Scrambling occur in each vP before PREDICATE SHIFT applies. This is what blocks such egregious sentences as “Some spoke to Henry to Sal and others.” In general, this will guard against sentences flying apart in bizarre ways in coördinations.

<sup>37</sup> Don't take the name “Predicate” too seriously — there is no reason to believe that it refers to a set of things which can be semantically characterizable.



Like (162) will be all Gapping sentences in which a subject and some other VP internal constituent are stranded. Cases like “Some ate natto and others rice” will have precisely the same structure, but without a modal in  $T^0$ , and with an object DP Scrambled, rather than a PP. Something along the lines of (163), perhaps.

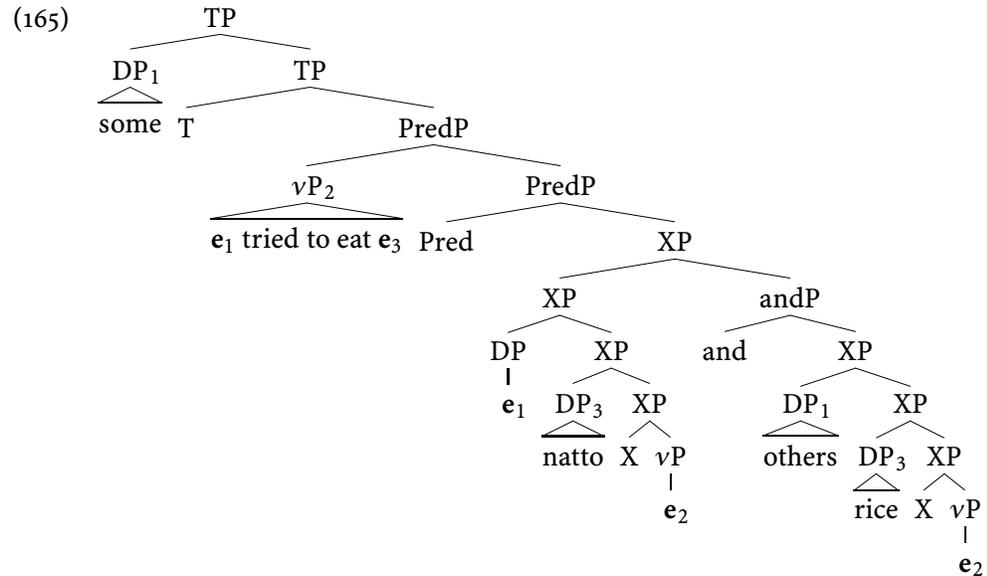


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Similarly, a long-distance Gap, such as (164), will have a representation like that in (165)

(164) Some tried to eat natto and other ~~tried to eat~~ rice.

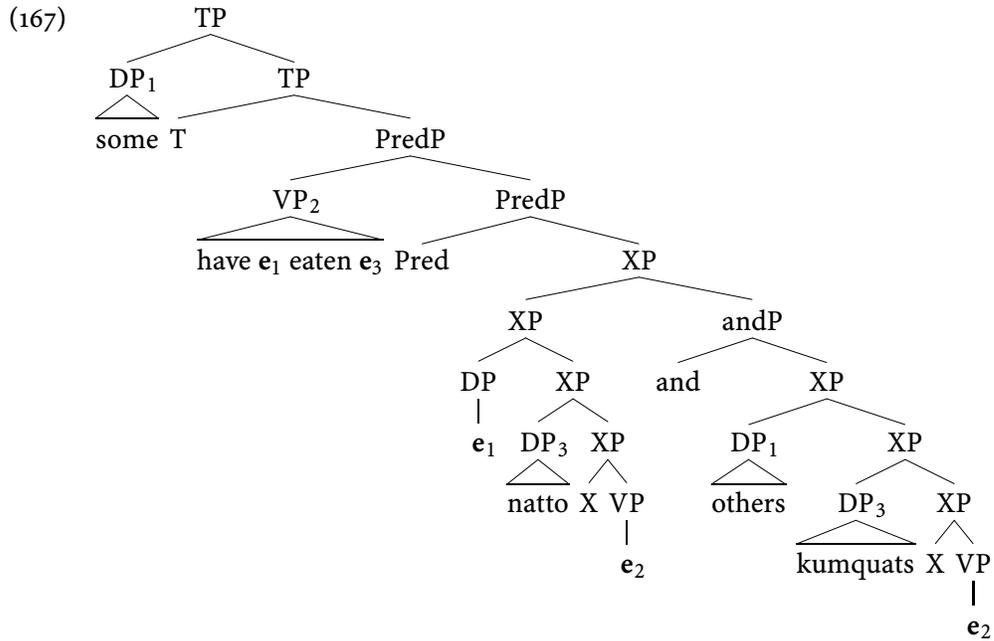


Note that in this case, PREDICATE SHIFT moves a  $vP$  that contains an infinitival complement in it and, consequently, the object of that infinitive must undergo a comparatively longer Scramble. It's in these contexts that we see the locality conditions on Scrambling playing a role, then. Only when these constraints allow a term to escape a  $vP$ , will that term be left as a remnant for PREDICATE SHIFT (and, therefore, Gap).

A special instance of this case arises in situations where an auxiliary verb has Gapped, such as (166), which will get the surface representation in (167) on page ??.

(166) Some have eaten natto and others ~~have eaten~~ kumquats.

What's of special interest about cases such as these is that they constitute the first piece of evidence that terms can Scramble to a position other than immediately above  $vP$ . To form the proper constituent to Gap in this case, it is necessary for the objects (and subjects) to Scramble to a position immediately outside the VP headed by *have*. Putting this case together with all those we've seen up to now, the generalization that emerges is that terms can Scramble to a position immediately beneath Pred. When Pred embeds a VP, as it does in (167), then Scrambling takes phrases out of this VP; when Pred embeds a  $vP$ , as it has in all of our previous examples, Scrambling removes terms from that  $vP$ . Continuing to use "XP" as the



name for the phrase to which Scrambled items adjoin, this generalization can be expressed as (168).

- (168) **XP POSITION**  
XP is only selected by Pred.

As we shall see in the next chapter, the position of XP is the source of some of the differences between verb-initial and verb-final Germanic languages.

In each of these representations, Scrambling has positioned the remnants in the second conjunct so that the subject comes first. In fact, this is the required order. If Scrambling were to put the subject second, as in (169), the result is ungrammatical.

- (169) \* Some spoke to Sal and to Henry ~~spoke~~ others.

However, outside skewed coordinations, Scrambling does not seem to be forced into having this outcome. In (155), for instance, the sentence “There spoke to Sal Holly” is given a representation in which the PP is Scrambled to a higher position than *Holly* is Scrambled to. Nonetheless, there are other ways of getting this word-order ((151), for instance), and we might wonder therefore if Scrambling shouldn’t be generally constrained so as to prevent something from Scrambling past the subject.

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There is evidence, I believe, that (155) is the correct parse for sentences like “There spoke to Sal Holly,” and consequently that we don’t want to block (169) with a general constraint on Scrambling. A difference between (155) and (151) is the relative surface scopes that they assign to the subject and indirect object. Only in (155) does the subject fall within the scope of the indirect object in its surface position. It is notoriously difficult to determine the surface scope of items because of the availability of QR and reconstruction, which allow the surface representations to be considerably different from their interpreted representations. The only phenomenon I know of that seems to be unsusceptible to QR and reconstruction is the requirement that certain negative polarity items fall within the scope of an appropriate licensing term.<sup>38</sup> By virtue of this phenomenon, it appears that the subject does fall within the scope of the indirect object in the surface representation of this string:

- (170) There spoke to no one anyone from this office.  
*compare:*
- i. \* There spoke to everyone anyone from this office.
  - ii. \* Anyone from this office spoke to no one.

For this reason, we need to find a way of letting Scrambling manufacture representations like (155) in which an object precedes a subject except in Gapping contexts.

I propose that we use the fact that the locality condition in ASSIGN CASE drives terms to the edge of a phase. Recall that one of the effects of this locality condition is that it forces a phrase dependent on some Case assigner to the edge of any phase that lies between the Case assigner and that term. Because skewed coördinations place the  $T^0$  which the subject is dependent on Case for outside the coördination, this effect can be invoked if the coördinates are phases. Let’s adopt (171), then.

- (171) Coördinates are phases.

Scrambling remains free to adjoin items to XP in either order, therefore. But if one of those XPs is a coördinate, as it is in Gapping constructions, then any term within that XP which is dependent on Case from something outside the coördinate will have to end up at the edge. Because subjects are the only terms within skewed coördinations that are dependent on Case from outside, they are the ones that will be driven to the edge. All that remains is to ensure that Scrambling the subject to the edge of XP means that it surfaces on the left, rather than on the right. Here is one place, then, where a linear restriction is needed. This could be achieved by forcing all movement to be leftward, as in Kayne (1994), or by narrowing the restriction in

<sup>38</sup> See Takano (2002). Even this generalization has certain counterexamples, however: see Uribe-Echevarria (1994).

ASSIGN CASE so that it mentions “left edge” rather than just “edge,” as Chomsky (2001) does.

This, in basic outline, is how I propose to derive complex Gaps from PREDICATE SHIFT. There are quite a number of additional cases to consider, many more than I have a means of exhausting. But simple variations on the derivations we have examined here will produce the bulk of straightforward cases. Some of the less transparent variations will be taken up in later sections. But before turning to those, let’s consider how this proposal fares in comparison with one that uses Pseudogapping. I listed a series of difficulties for treating complex Gaps as Pseudogaps. Does treating them as across-the-board instances of PREDICATE SHIFT gain any ground with these problems?

One of these difficulties was that the licensing environments for complex Gaps do not match those on Pseudogapping. For example, typologically there is reason to believe that the distribution of Pseudogapping across the world’s languages does not correlate with the distribution of complex Gaps. On this approach we expect complex Gaps to correlate, crosslinguistically, with PREDICATE SHIFT in skewed coordinations. This at least squares with the German data — a language that has complex Gaps, does not seem to have Pseudogapping, but does, arguably, have skewed coordinations and PREDICATE SHIFT.

Do we have an account of the fact that APs can form Gaps? This, recall, is unexpected on a Pseudogapping-based account; but it is expected on the proposal here only if PREDICATE SHIFT applies to APs as well as VPs. Since I do not know of reliable independent diagnostics for the existence of PREDICATE SHIFT, I cannot establish that the Gappability of APs is expected. Similar remarks hold for NPs, which we’ve seen evidence that Gapping can affect. In this realm, then, we merely avoid some of the counterexamples to the Pseudogapping thesis, but do not accrue positive evidence on behalf of a PREDICATE SHIFT analysis. Nonetheless, we learn that the set of things that we must allow PREDICATE SHIFT to move includes NPs and APs:<sup>39</sup>

(172) PREDICATE = {VP, *v*P, NP, AP, ...}.

Consider next the fact that there are slight differences in the strings that Gapping and Pseudogapping can affect. As we saw with (139) (repeated here), of the two, only Gapping can elide a verb and the subject of that verb’s complement.

(??) a. Some found Sal clever at pictures and others ~~found Sal~~ good with kids.

<sup>39</sup> Or, alternatively, it may be that the NPs and APs that appear to undergo PREDICATE SHIFT are actually embedded within a *v*P which has undergone PREDICATE SHIFT. Which of these alternatives is correct hinges on what it turns out determines the distribution of *v*P.

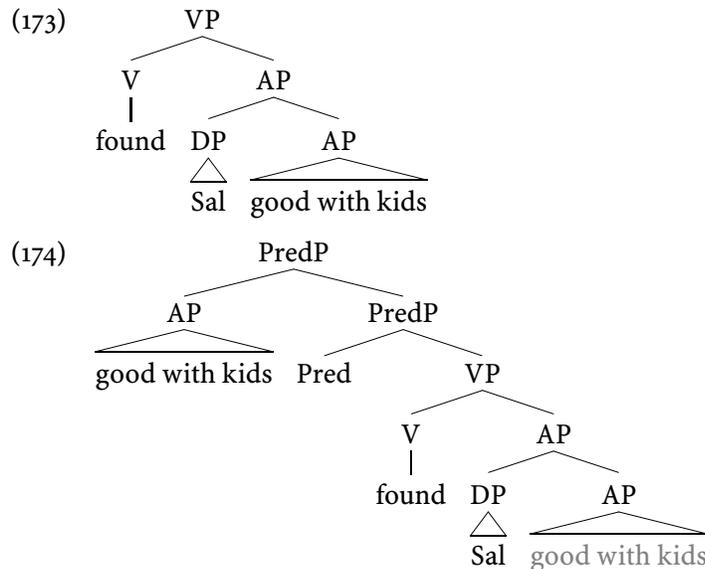
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- b. \* I found Sal clever at pictures while Sam did  $\Delta$  good with kids.

In this case, the PREDICATE SHIFT based account does better than merely avoid a counterexample, it makes some ground on explaining the difference. This is because an across-the-board approach makes Gapping differ from Pseudogapping (and other ellipsis phenomena) in just the way necessary to produce contrasts of these sorts. It will take a few steps to see what's happening.

Consider first what the unavailability of the Pseudogap implies. In a syntax that has PREDICATE SHIFT, it must be impossible to go from a representation like that in (173) on page ?? to a parse like (174).<sup>40</sup> The Pseudogap in (139b) relies on the



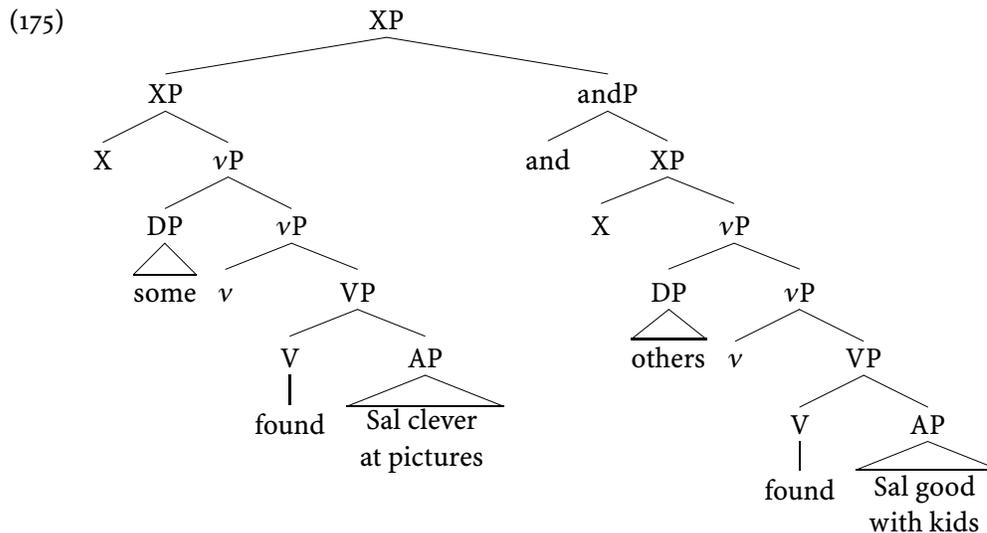
constituency displayed by (174), and so preventing (174) will have the desired result of blocking this ungrammatical sentence. Because a PREDICATE has been subextracted from another PREDICATE in (174), this violates SHALLOWEST which, recall, prevents exactly this (see (160)). The failure of Pseudogapping here is therefore expected.

If SHALLOWEST is responsible for preventing the constituency that is required for the ellipsis in (139b), then how does Gapping manage to elide what appears to be this constituent? Gapped material is just stuff that manages to surface outside a skewed coördination, and as a consequence, there is no requirement that it make a constituent. This is evident already from the parse given to examples in which a

<sup>40</sup> I've excised *vP* in these examples for brevity's sake.

modal and a main verb Gap. As (162) illustrates, the modal “Gaps” by virtue of its underlying position, and the main verb Gaps by virtue of PREDICATE SHIFTING out of the coordination. For this reason, the set of strings that Gap will be larger than the set of strings that can elide. The Gappable strings are those that make-up the material that can fall outside a coordination holding two *v*Ps. Because PREDICATE SHIFT moves *v*Ps into this region, the strings that can Gap will include all of those that can undergo VP Ellipsis (and Pseudogapping), but will also include any other material that can be generated in, or moved to, this region. In the case at hand, what’s required is for the verb and the accusative subject to independently across-the-board move.

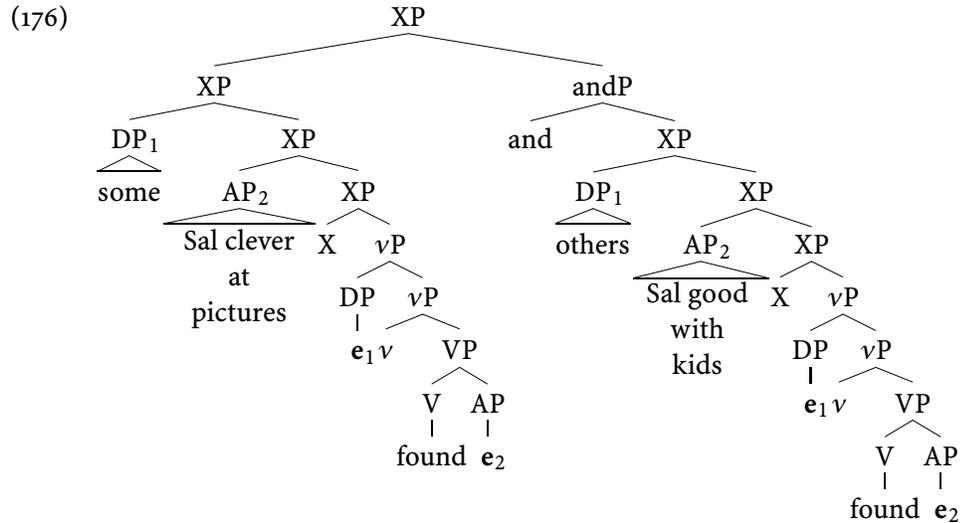
There are a variety of ways of achieving this aim. One that is a simple extension of the operations already embraced goes as follows. We start with a representation like (175).



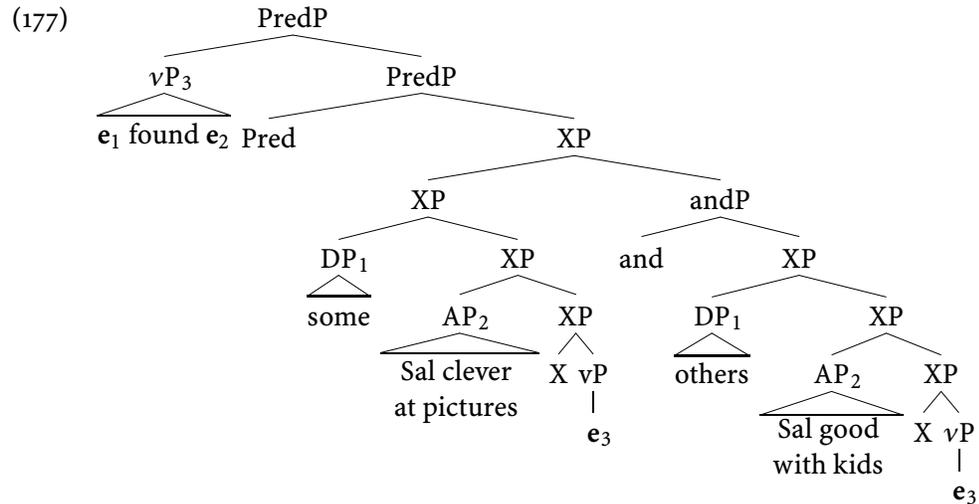
Scrambling forms the representation in (176).

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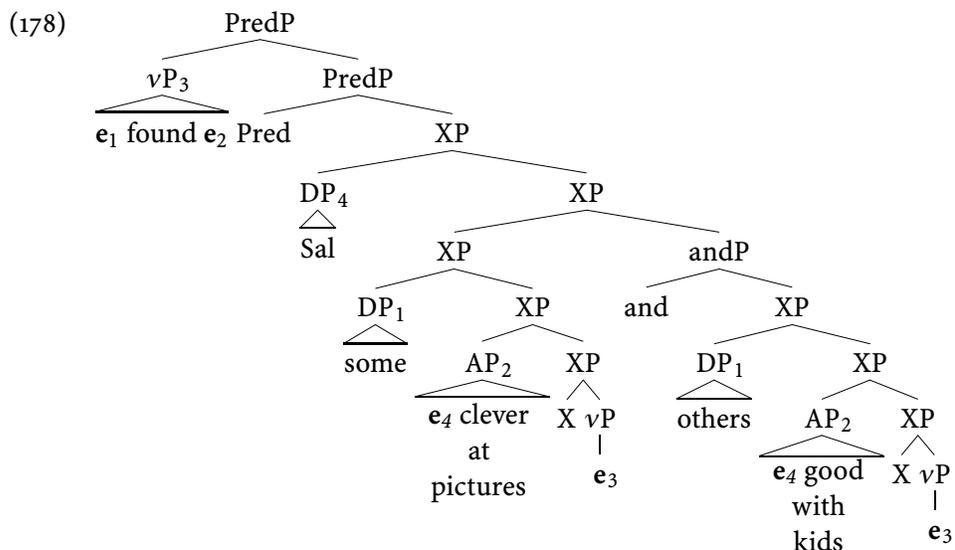


Then PREDICATE SHIFT lifts  $vP$ , and consequently *found*, out of the coordination in across-the-board fashion, forming (177).

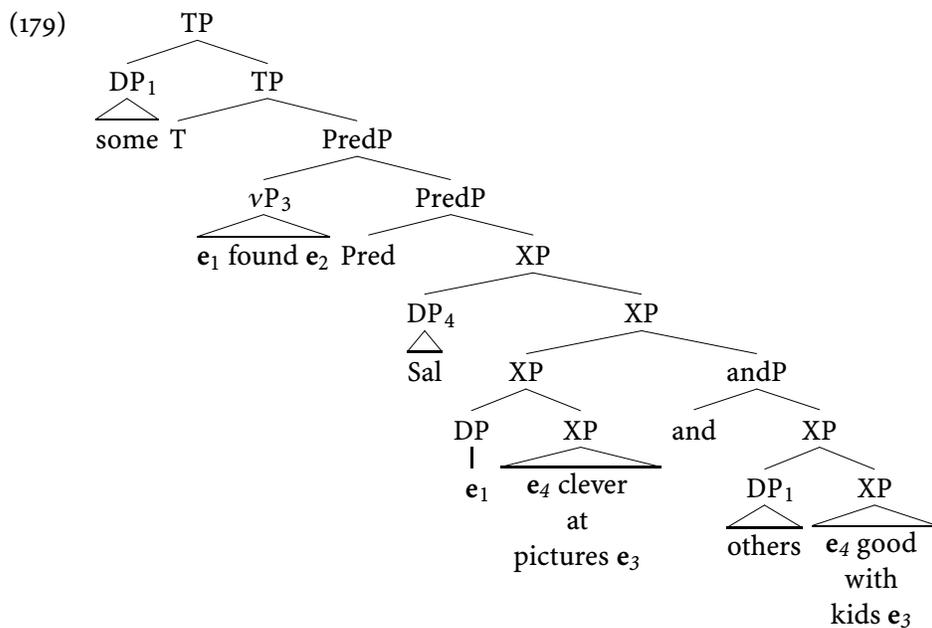


This step in the derivation Gaps *found*, leaving *Sal* to be Gapped. To achieve this, I suggest that we also let Scrambling move terms outside  $vP$  and, in this context, this will let Scrambling bring *Sal* out of the coordination in across-the-board fashion. This can be achieved if prior to (177), (178) is produced.<sup>41</sup>

<sup>41</sup> (178) precedes (177) because of the cyclic nature of derivations.



Once  $T^0$  is merged into this representation, and the subject of the first conjunct raises to its Specifier, the surface parse in (179) is achieved.



In this way, then, the appearance that *found Sal* can Gap as a unit is achieved by Gapping *found* and *Sal* independently.

The other place where Gapping seems to be capable of affecting a string that

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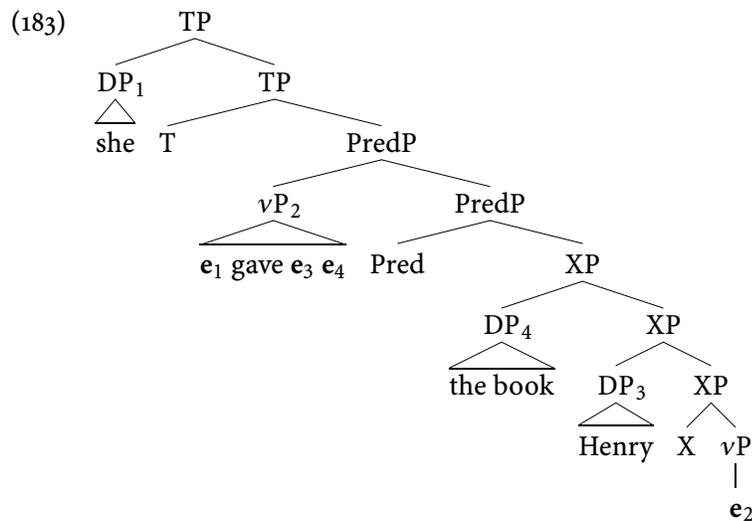
Pseudogapping cannot occur in the double object construction. Although the contrast is slighter, there are differences of the sort that (180) illustrates.

- (180) a. Some gave the men nuts and others ~~gave the men~~ roses.  
 b. ?? While some might give the men nuts, others will  $\Delta$  roses.

To understand this case completely would require more precision about how the double object construction works than I am able to render. Nonetheless, there is reason to think that it can be accounted for under the across-the-board analysis in a way that is parallel to the small clause cases. One of the peculiarities of the double object construction is that the two DPs may not end up in reverse order. Unlike (181a)'s alternate in (181b), there is no alternate for (182a) like (182b).

- (181) a. She gave the book to Henry.  
 b. She gave to Henry the book.  
 (182) a. She gave Henry the book.  
 b. \* She gave the book Henry.

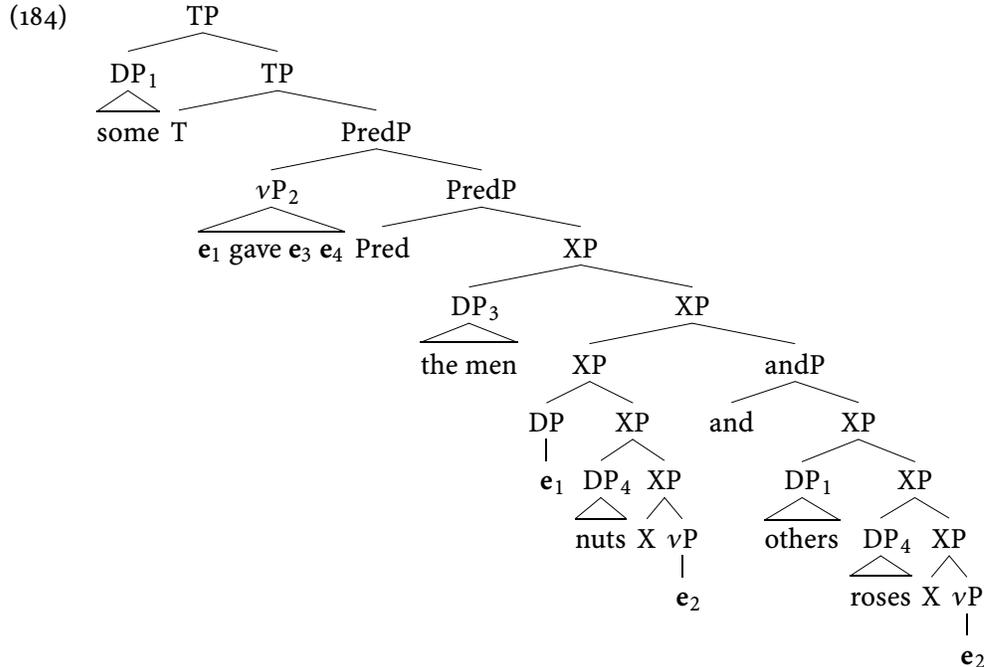
This suggests that there is some force which prevents the second DP from moving past the first, for otherwise (at least if the syntax being proposed here is correct) it should be possible to manufacture a representation like (183).<sup>42</sup>



This condition, whatever its source, will block the constituency that would be required to form the ellipsis in (180b). However, because the across-the-board move-

<sup>42</sup> Bruening (2001) argues that such a constraint holds of the LFs of double object constructions — grounding it in an analysis of locality conditions on *wh*-movement in Richards (1997).

ment account of Gapping allows it to affect strings that do not fit into one constituent, it is capable of producing the Gap in (180a) without violating this constraint. Through the agency of PREDICATE SHIFT and across the board Scrambling of the first object, (180a) could receive the surface representation (184) on page ??.



An across-the-board account of complex Gaps therefore gains some ground on understanding why the strings that can undergo Pseudogapping are a proper subset of those that can Gap, and, at a minimum, does not face a counterexample in cases where APs have Gapped.

Let's turn next to consider the identity conditions that match Gapped strings with their antecedents. Recall that here too we found that Pseudogapping and Gapping behaved slightly differently. While the antecedents to Gapped strings do not have to match perfectly either the syntax or the semantics of the strings that Gap, there is not the same degree of looseness that Pseudogapping displays. Does an across-the-board account help characterize the degree to which a Gapped string must match its antecedent?

Recall that Gapping allows for the familiar strict/sloppy ambiguity that arises in many forms of anaphora. The example in (185a), for example, may get an interpretation along the lines in (185b).

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- (185) a. Every boy tied his shoes slowly and every man quickly.  
b. Every boy<sub>1</sub> tied his<sub>1</sub> shoes slowly and every man<sub>2</sub> tied his<sub>2</sub> shoes quickly.

Across-the-board movement also seems to license this, as cases such as (186) illustrate.

- (186) It's [<sub>VP</sub> tie his shoes]<sub>1</sub> that every man can e<sub>1</sub> and every boy can't e<sub>1</sub>.

Just as in (185), the pronoun in (186) can independently pick up a binder in each of the conjuncts.

Across-the-board movement is also like Gapping in licensing a “fresh” indefinite in the positions it relates. In an example such as (187), for instance, the book that Mittie gives to me does not have to be the same one that Betsy isn't able to give to me.

- (187) It's [<sub>VP</sub> give a book to me]<sub>1</sub> that Mittie might e<sub>1</sub> but Betsy can't e<sub>1</sub>.

This sentence, in other words, has a meaning close to that which would arise if the clefted VP were to be restored to each conjunct:

- (188) Mittie might give a book to me but Betsy can't give a book to me.

Gapping, as we saw, has the same property: (189a), like (189b), does not entail that the books given to Smith are the same as those given to Jones.

- (189) a. Some gave books to Smith and others to Jones.  
b. Some gave books to Smith and others gave books to Jones.

To judge from these phenomena, then, it appears that the degree to which an antecedent may deviate from a Gapped string is a degree which across-the-board movement permits. It also appears, however, that across-the-board movement does not go beyond this looseness and, in this respect too, matches what we have seen in Gapping. In particular, unlike Pseudogapping, which allows for a passive VP to serve as antecedent for an active VP (see (88a) repeated below), neither Gapping (see (88b), repeated below) nor across-the-board movement (see (190)) permit this equivalence.

- (??) a. ? The budget cuts might be defended publicly by the chancellor, but surely she wouldn't  $\Delta$  her labor policies.  
b. \* The budget cuts might be defended publicly by the chancellor, and the president ~~might defend publicly~~ her labor policies.
- (190) \* It's [<sub>VP</sub> defended publicly]<sub>1</sub> that the budget cuts might be e<sub>1</sub> but the president won't e<sub>1</sub>.

We also witnessed, recall, that Gapping, unlike Pseudogapping, cannot let an NP be the antecedent for a VP (see (89), repeated below).

- (??) a. ? Sal may be a talented forger of passports, but surely he can't  $\Delta$  paintings.  
 b. \* Sal may be a forger of passports and Holly ~~may forge~~ paintings.

It is not trivial to find an example that illustrates whether across-the-board movement permits this or not, given the relatively rigid unmoveability of NPs. But at least everything that is known about across-the-board movement is consistent with it not being permitted.

To the extent that it can be known, then, the identity conditions between a Gapped string and its antecedent are identical to those found in across-the-board movement. Here too, reducing complex Gaps to across-the-board movement gains some ground on explaining its properties.

Finally, there is the puzzle of the influence complex Gaps have on the scope that the contents of  $T^0$  may have. Characterizing simple Gaps as skewed coordinations explains how it is that a modal, or negated term, in  $T^0$  manages to have scope over the coordination. But in the case of complex Gaps, it is also possible for the term in  $T^0$  to be interpreted in each conjunct — that is, for the coordination to have  $T^0$  within its scope — and this is unexpected. Does seeing complex Gaps as PREDICATE SHIFT applying across-the-board help with this puzzle?

To see the contribution that PREDICATE SHIFT can make to this problem, it will be useful to first consider the case of adverb scope in Gapping constructions. Jackendoff (1971) argues that adverbs (seemingly) in the first conjunct are necessarily understood to be present in both. For example, he claims that *quickly* and *sometimes* in (191) must modify each conjunct.

- (191) a. Simon quickly dropped the gold, and Jack ~~quickly dropped~~ the diamonds.  
 b. Max sometimes beats his wife, and Ted ~~sometimes beats~~ his dog.  
 (Jackendoff 1971, (12) & (13):23)

This may be clearer in (192), where the scopes of the adverbs relative to the clauses is more transparent.

- (192) a. The modal always moves to the left or the VP to the right.  
 b. Sal frequently called Holly or Harry her neighbor.

In both cases, the adverb can have narrow scope relative to the disjunction; that is, they can have meanings in (193).

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- (193) a. The modal always moves to the left or the VP always moves to the right.  
b. Sal frequently called Holly or Harry frequently called her neighbor.

Under these interpretations, the sentences in (192) might express alternative explanations for something. Think of (192a), for instance, as offering two ways of accounting for how material manages to intervene between a modal and the VP it selects.

The sentences in (192) are ambiguous. Not only may the adverbs be interpreted within each disjunct, but they are capable of having the disjunctions in their scope as well. Thus, (192b) can mean that it was frequent for Sal to have called Holly or for Harry to have called her neighbor. And, similarly, (192a) can describe a law, say, which is satisfied either by the modal moving leftward or the VP moving rightwards.

But there are some adverbs that appear to require a narrow scope interpretation, and are not ambiguous in the way that (192) are; (194) is an example that Barry Schein suggests.

- (194) ?\* Melissa simultaneously tied her shoes and Tom his boots.

The cause of the awkwardness in (194) is *simultaneously*; if this adverb is removed, the sentence is perfectly acceptable. I suspect that what makes (194) ungrammatical is that it needs to be construed so that *simultaneously* modifies the second conjunct as well as the first. This makes it as awkward as “Melissa simultaneously tied her shoes and Tom simultaneously tied his boots.” Interestingly, the awkwardness of *simultaneously* in Gapping contexts is not restricted to phrasal gaps; examples such as (195) are as awkward as (194).

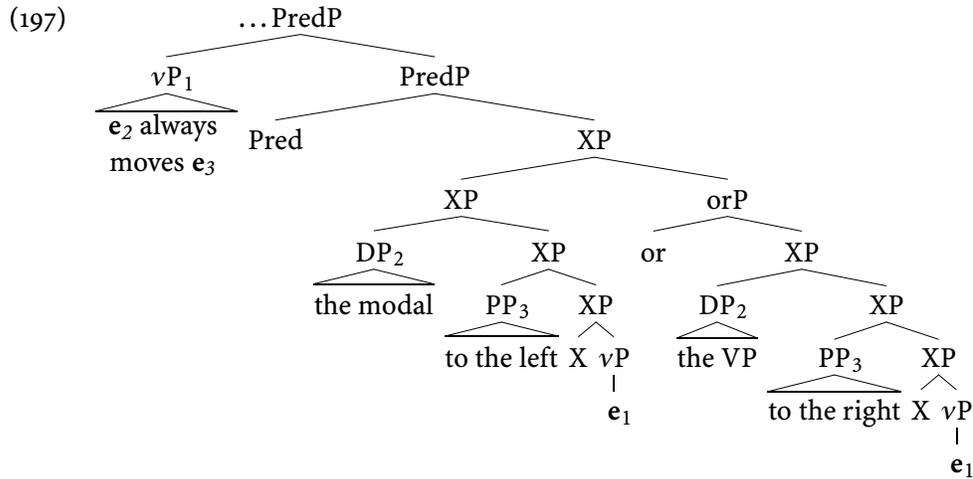
- (195) ?\*Melissa has simultaneously tied her shoes and Tom buckled his boots.

Barry Schein points out that this is unexpected on the present account, as simple Gaps should have essentially the same syntax as (196), which is perfectly grammatical.

- (196) Melissa has simultaneously tied her shoes and buckled her boots.

If the ungrammaticality of (194) stems from PREDICATE SHIFT obligatorily reconstructing *simultaneously*, and the badness of (195) has the same source, then we would have to see PREDICATE SHIFT playing a role even in simple Gaps. We shall.

The narrow scope reading of these adverbs can be credited to their being part of the predicate which PREDICATE SHIFT has across-the-board moved. Using (192a) as a representative example, this would produce a representation like (197) on page ??, ignoring, for the moment, movement of the first subject to Specifier of TP. The



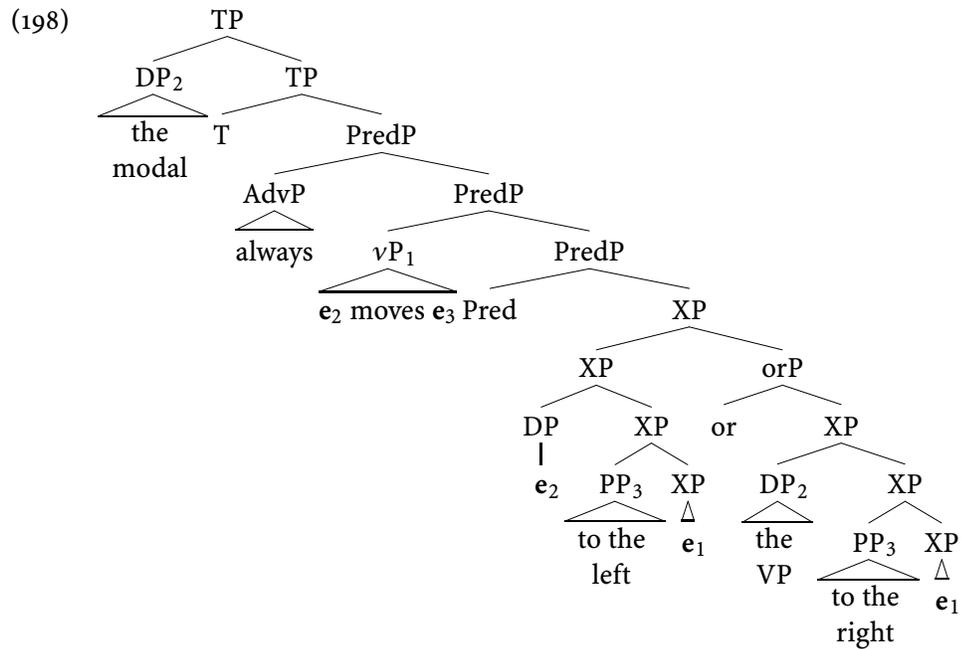
two occurrences of “ $e_1$ ” in this representation stand for copies of *always moves*, recall. If these copies are the ones that get semantically interpreted, the reading in which *always* falls within the disjunction arises. Takano (1995) and Heycock (1995) have argued from reconstruction effects that moved  $v$ Ps are always interpreted in their underlying position. If we follow their conclusions, then these lower copies are necessarily the ones that get interpreted, and *always* will unambiguously fall within the scope of the disjunction. When *always* falls outside the scope of the disjunction, it must have an underlying position that puts it outside the  $v$ P and the disjunction altogether. We can represent this case with (198) on page ??.

Let’s consider now the case of *simultaneously*, which, as (194) and (195) indicate, has no grammatical outcome when singular clauses are conjoined. To derive this, we must assume that *simultaneously* cannot be successfully interpreted in the higher of these two positions. I suggest we hope that the semantics of *simultaneously* required that it be part of a PREDICATE. As a result, *simultaneously* will always be part of the the material the PREDICATE that moves across the board in Gapping contexts. In (194), this will force *simultaneously* to be interpreted in both conjuncts, and because neither of these give *simultaneously* the plurality it requires, the result is ungrammatical. This leaves (195), which Gaps just an auxiliary verb, and therefore does not require across the board PREDICATE SHIFT, to explain. Let’s set this case aside for just a moment.

What these cases suggest, then, is that material that is part of the complex Gap can, or must, get interpreted within the coordination. On the across-the-board PREDICATE SHIFT account, this flows from the fact that moved PREDICATES are interpreted in their original, pre-moved, position. To extend this account to modals

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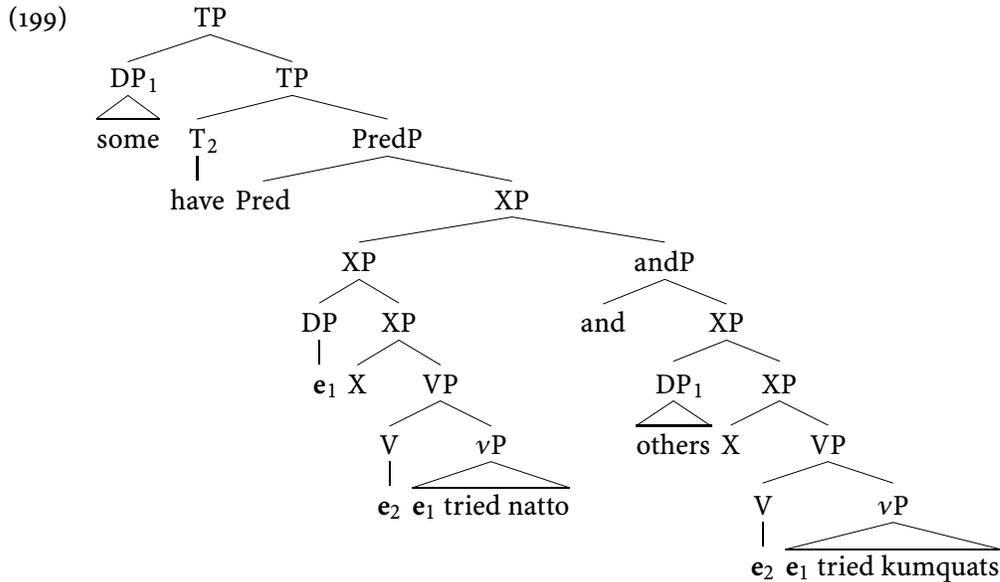
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requires that we allow modals the possibility of being part of the PREDICATE that across-the-board moves. This, of course, entails that they must have a different position than I have assigned to them up to now. When they Gap alone, however, it is necessary to preserve their obligatory wide-scope interpretation and this means that there must be some reason why they cannot be interpreted as part of the shifted PREDICATE in this situation. Together, these needs require that we revisit how simple Gaps work.

I simplified the case of simple Gaps at the outset, and it will be useful to now reveal what was suppressed then. We followed Siegel in taking simple Gaps to be the result of coordinations skewed so that  $T^0$  lays outside the coordination. This correctly places the contents of  $T^0$  in a position that gives the appearance of it having “Gapped” out of the second (and subsequent) coordinations. I illustrated this account always with examples that put modals in  $T^0$ , but in fact there are other terms that can occupy  $T^0$  in English, the auxiliary verbs *have*, *be*, and *do* for instance. But *be* and *have* (and sometimes *do*) are thought to move into  $T^0$  because, unlike the modals, these terms have the distribution of verbs. Thus, the simplification now revealed is that when an auxiliary verb forms a simple Gap, its movement to  $T^0$  must be across-the-board. If we momentarily ignore the action of PREDICATE SHIFT — which we’re going to see has a complicated outcome in the simple Gap scenario —

a simply Gapped auxiliary will have the representation in (199) on page ??.



The difference in scope between simple and complex Gaps that we are trying to understand arises with auxiliary verbs in the same way that it does with modals, at least to judge from the behavior of *not* when it is contracted onto an auxiliary verb. Thus, *hasn't* in (200) obligatorily has the disjunction in its scope. (200) has only the interpretation paraphrased by (200a), not (200b).

- (200) Ward hasn't prepared natto and his guest eaten kumquats.
- ≈ It's not the case that Jerry has prepared natto and that Jill has eaten kumquats.
  - ≠ Jerry hasn't prepared natto and Jill hasn't eaten kumquats.

But both readings are possible when *hasn't* is part of a complex Gap, as in (201) on page ??.

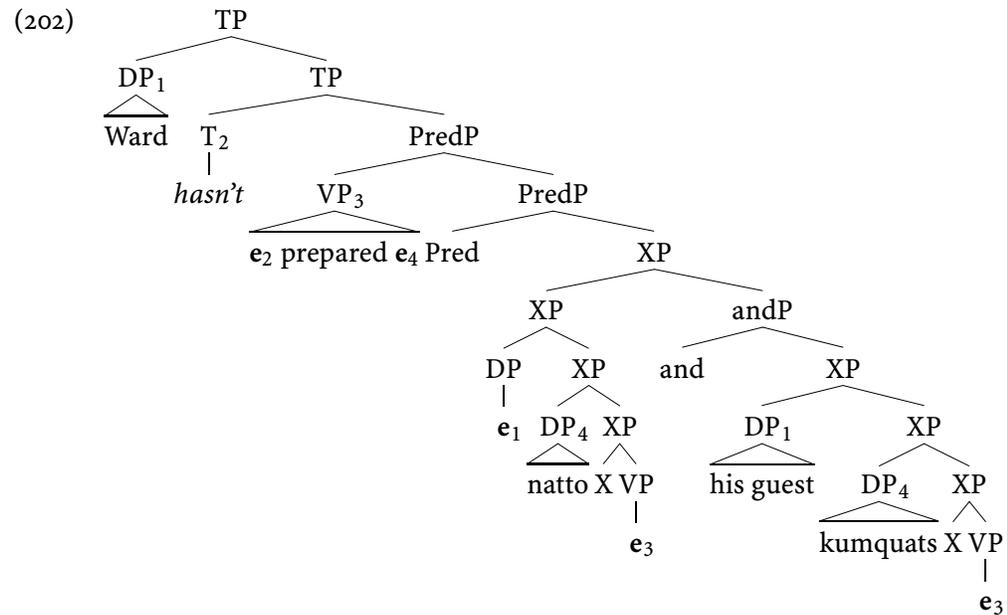
- (201) Ward hasn't prepared natto and his guest kumquats.
- ≈ It's not the case that Jerry has prepared natto and that Jill has eaten kumquats.
  - ≈ Jerry hasn't prepared natto and Jill hasn't eaten kumquats.

It's reasonable to expect that the same process is responsible in both cases.

The availability of the narrow scope reading for an auxiliary verb in the complex Gap case is expected on the account given here. If the movement of an auxiliary verb

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is also susceptible to reconstruction — that is, if the lower copy of a moved auxiliary can be interpreted — then the surface parse for these cases, given in (202), will allow the VP that has PREDICATE SHIFTED to be interpreted with *hasn't* in it and, as we have seen above, moved PREDICATES are interpreted in their base position.



This will produce the reading in which “hasn’t prepared” is interpreted in each conjunct. If the higher copy of *hasn't* can also be the one interpreted, then this parse will also give rise to the wide-scope reading for *hasn't*. In this case the PREDICATE that will have shifted, and will be interpreted in each conjunct, will be “e<sub>2</sub> prepared,” where “e<sub>2</sub>” will either be interpreted as a variable bound to *hasn't* or will get no interpretation.<sup>43</sup>

To extend this account to modals, then, requires that they too start out in a lower position and move into T<sup>0</sup>. Modals are clearly not verbs in English, but they are often classed with the marker of certain infinitives: *to*.<sup>44</sup> There is some evidence that *to* has access to a position lower than that which modals surface in. Unlike modals, infinitival *to* can follow sentence negation:

- (203) a. \* Sal not must eat.  
 b. Sal tried [not to eat].

<sup>43</sup> The choice depends on how the semantics of negation and verbs are worked out.

<sup>44</sup> At a minimum, *to* and modals are in complementary distribution, and this speaks on behalf of their belonging to the same category. See Jackendoff (1977), Emonds (1976), Akmajian, Steele, and Wasow (1979), Roberts (1985) and much other work, stretching back to Chomsky (1957).

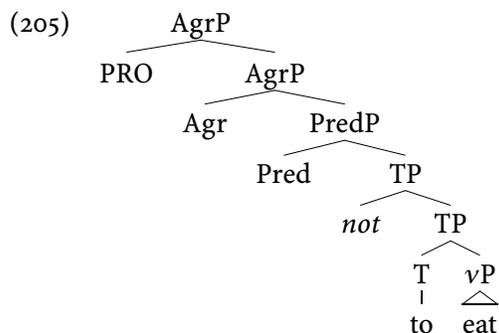
For some speakers, it is also possible for *to* to precede sentence negation, as in:

(204) Sal tried [to not eat].

A way of modeling this, that follows closely the analysis of French auxiliary verbs in Pollock (1989), is to let clauses have two functional heads that encode finiteness. The lower of these is where modals and *to* are introduced, and the higher of these determines the Case and Agreement behavior of the clause. Pollock (1989) associated the higher of these two with tense morphology and the lower with agreement morphology, and named them accordingly. Chomsky (1991), Belletti (1990), Vikner (1995) and much related work reversed this assignment, associating the higher with agreement and the lower with tense. The values given to these heads will have no consequence here, but I'll follow the second trend. Because the higher of these heads —  $\text{Agr}^0$  — forces a verb to move into it when it is finite, modals will be driven from their underlying position into  $\text{Agr}^0$ . If  $\text{Agr}^0$  does not have this consequence in infinitival clauses, perhaps by being optional in these contexts, then the infinitival marker *to* is allowed to remain in its underlying position, with the option, for some, of moving into  $\text{Agr}^0$ . If we follow Pollock in placing *not* between these two heads, the paradigm in (203)-(204) results.

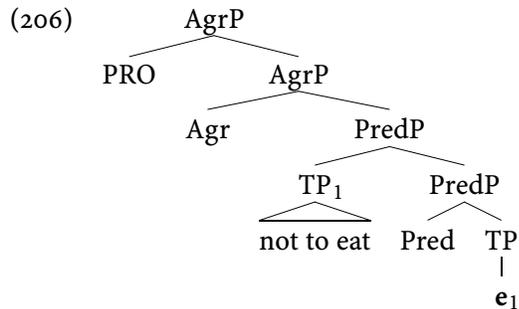
To capture the narrow scope reading of modals in complex Gaps, it will be necessary to place the lower of these functional heads —  $T^0$  — within Predicate Phrase and to let TP be one of the PREDICATES that PREDICATE SHIFT targets. These changes will generate the word-order in simple clauses as follows.

If we ignore the irrelevant movement of the subject, a *to*-infinitival will get an underlying representation like (205) and produce, through PREDICATE SHIFT, the representation in (206) on page ?? . Note that I have placed *not* inside TP in order to allow it to be part of the PREDICATE that is interpreted inside each conjunct. It's necessary to guarantee that *not* appears at the left edge of TP in order to correctly place it relative to *to*. This could be done by having it head a NegP that selects TP, as in Pollock (1989), or to position it like a preverbal adverb.

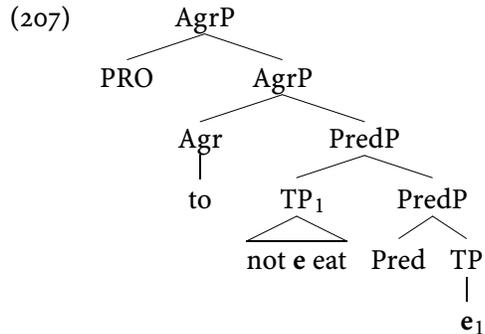


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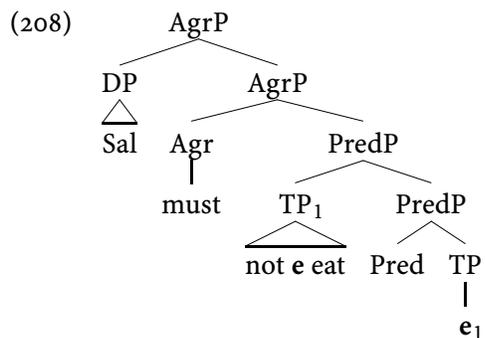
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If the option of moving  $T^0$  to  $Agr^0$  is taken, then the word-order in (204) is produced; (207) will be its surface parse.

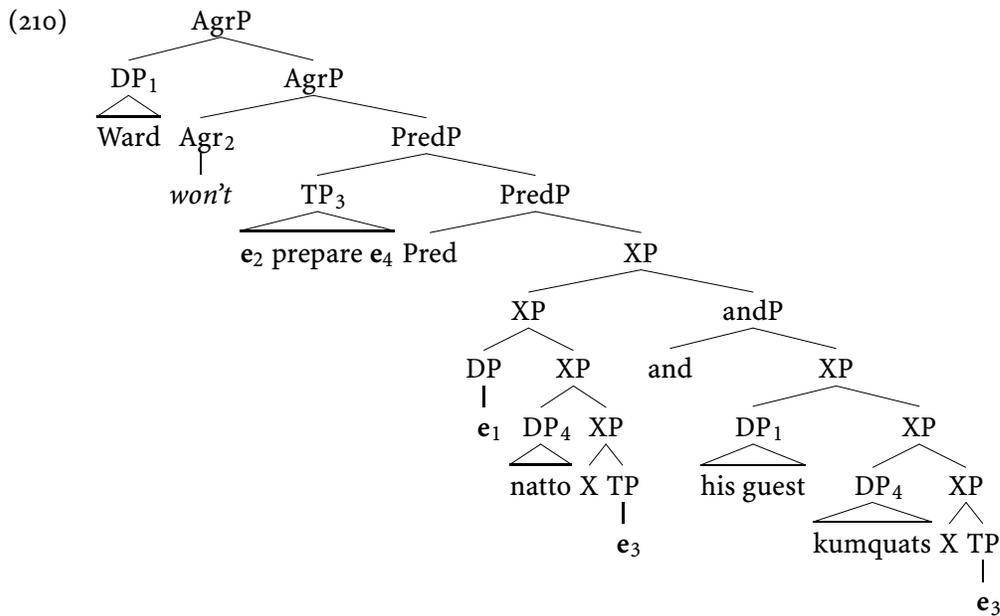


Because modals are only found in finite clauses, and finite clauses have an  $Agr^0$  that requires something to surface in it, only this last kind of output is possible for modals. PREDICATE SHIFT and  $T^0$  to  $Agr^0$  will combine to give “Sal must not eat” a surface representation like (208).



With these changes, the readings for a modal in a complex Gap now follows the same syntax that was given to auxiliary verbs. An example such as (209), for instance, will have the surface parse in (210) parallel to (202).

(209) Ward won't prepare natto and his guest kumquats.



If *won't* is interpreted in its surface position, then it is construed outside the coördination. If, however, the copies of *will* and *not* that are within TP, and which, when contracted, produce the surface form *won't* in  $T^0$ , are the ones that are interpreted, then, because TP's copies in each conjunct are interpreted, the narrow scope reading for *won't* is manufactured.

What's left is to understand why simple Gaps don't allow the reading in which the modal or negation is reconstructed into each conjunct. The central difference between simple Gaps and complex ones is what moves across-the-board. In complex Gaps, as we've seen, it is TP, VP,  $vP$  or some other PREDICATE that moves. When this PREDICATE has a scope bearing item within it, that item can be construed inside each conjunct because that's where the PREDICATE is interpreted. But in the simple Gaps we've examined, it's  $T^0$  or an auxiliary verb that moves across-the-board. Again suppressing the complexity that would arise if the effects of PREDICATE SHIFT were admitted, a simple Gap such as (211) will have the surface parse in (212) on page ??.

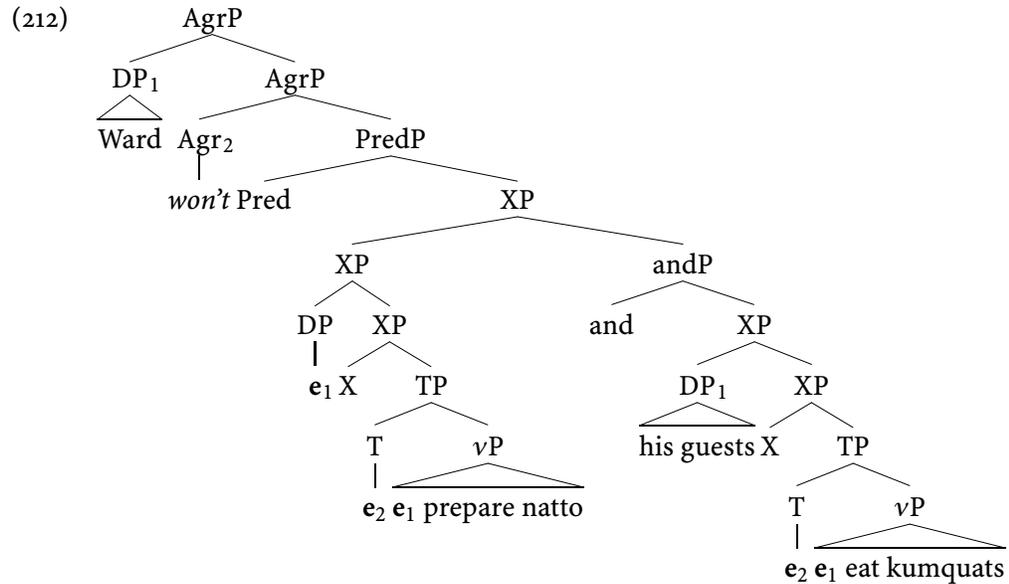
(211) Ward won't prepare natto and his guests eat kumquats.

Could it be that there is a difference in the availability of reconstruction for PREDICATES that move across-the-board and heads that move across-the-board?

In fact, there are rather severe constraints on reconstruction in across-the-board contexts, and though I do not understand the source of these constraints,

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there is a pattern to them that suggests their culpability in the cases we are examining. Using  $\bar{A}$  movement as a guide, it's already been observed that PREDICATES can reconstruct in across-the-board contexts (see the discussion on page ??). It's also possible, for positive indefinite DPs to reconstruct as well, as (213) indicates.

- (213)
- How many books has Liz read and Betsy written?
  - It's a kitten that Will desires and Carrie dreams of.
  - It's bees that Gary has nightmares about and Julie raises.
  - It's some problems that Sal needs to solve or Holly needs to tackle.
  - It's many beets that Mark wants and Stephanie needs.

In each of these cases, the moved item can get an independent construal in each conjunct. The kitten that Will desires could be different from the one that Carrie dreams of in (213b). And (213d) can assert that either Sal needs to solve some problems or that Holly needs to tackle some. The lowest copies of indefinites which are across-the-board moved can be the ones that get semantically interpreted.

But other sorts of scope bearing DPs do not allow for reconstruction in across-the-board contexts. Compare the examples in (214) to those in (213).

- (214)
- It's most kittens that Will desires and Carrie dreams of.
  - It's few bees that Gary has nightmares about and Julie raises.
  - It's every problem that Sal needs to solve or Holly needs to tackle.
  - It's no beets that Mark wants and Stephanie needs.

In these cases, the clefted DP cannot be construed in its underlying position in each coordinate. What (214a) says, for instance, is that there is some majority of kittens which are both desired by Will and dreamt of by Carrie. Similarly, (214c) claims that every problem needs to be solved by Sal and tackled by Holly. A parallel effect is found in (214b) and (214c), leading to a somewhat bizarre reading. However, these DPs are capable of being construed within the coordinates they've moved out of, if they've moved out as part of a clefted VP:

- (215) a. It's desire most kittens that Will will and Carrie won't.  
 b. It's raise few bees that Gary might and Julie does.  
 c. It's solve every problem that Sal should or Holly will.  
 d. It's want no beets that Mark should and Stephanie will.

Unlike (214a), *most kittens* in (215a) does not have to be construed outside the conjunction: the majority of kittens that Will will desire does not have to be the same majority of kittens that Carrie won't. And (215c) can assert that either Sal should solve all the problems or Holly will solve all the problems; it doesn't have to have the weaker interpretation, as (214c) does, that every problem needs either a solution from Sal or an attempt by Holly. The other examples in (215) behave similarly. The contrast between (214) and (215) is reminiscent, of course, of the difference between across-the-board moved modals and auxiliaries, and across-the-board moved PREDICATES containing modals or auxiliaries, that I have speculated might be responsible for the scopal behavior of simple and complex Gaps.

The generalization from these cases seems to be:

(216) **ATB RECONSTRUCTION**

If  $\alpha$  moves across-the-board, then the lowest copies of  $\alpha$  can be semantically interpreted only if

- a.  $\alpha$  is a PREDICATE, or  
 b.  $\alpha$  is a positive indefinite.

Naturally, without understanding what the source of (216) is, there is risk in using it to make predictions. That is a risk I shall now take.

In all the simple Gaps we have examined so far, the term that would have moved across-the-board either bears negation or is the modal *must*. These cases are gathered together in (217).

- (217) a. Ward won't prepare natto and his guests eat kumquats.  
 b. Ward hasn't prepared natto and his guests eaten kumquats.  
 c. Mittie must remove the engine from my car and Sam drive it down the road.

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- d. Ward can't eat caviar and his guest dried beans.
- e. One man must get the majority of votes and the other win the election.
- f. Kim didn't play bingo and Sandy sit at home all evening.

If (216) is our guide, we should not expect the cases with negation to reconstruct. And if *must* is a kind of universal quantifier, ranging over worlds or situations, for instance, then it should not be expected to fit (216) either. To the extent that (216) can be applied to cases where verbs or modals move, then, the account of simple Gaps offered here derives the fact that the examples in (217) don't allow the modal or auxiliary to fall with the scope of the coördination.

One way of testing this account would be to choose modals that (216) might plausibly allow to reconstruct in across-the-board contexts and see if they can get a narrow scope interpretation in simple Gaps. If *can* is a sort of positive existential, ranging over worlds or situations, then (218) is a possible test case.<sup>45</sup>

(218) The left eye can look up and the right eye look down.

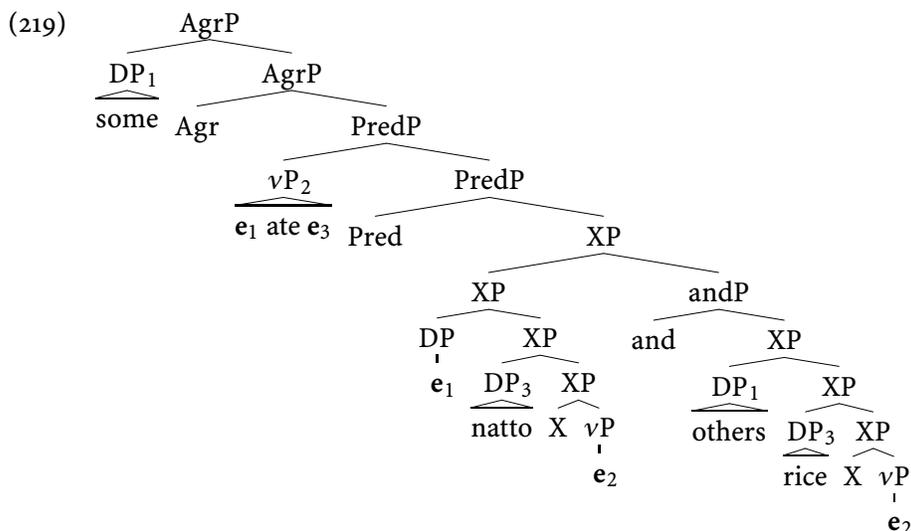
Indeed, I think it is possible to understand what this sentence says to be true of someone even if that person's physiology is the normal one that precludes one eye pointing up while the other points down. That is: it can say that it's possible for the left eye to look up and it's possible for the right eye to look down — this is the interpretation that arises with *can* is interpreted in each conjunct.

This scope difference between simple and complex Gaps was the last in our series of unexpected facts under the Pseudogapping account of complex Gaps. To the degree that the account sketched here is correct, it supports the across-the-board based account I am suggesting. There are three properties of Gaps, then, which can be viewed as supporting an across-the-board account: it explains why the set of strings that can Gap is a proper superset of those that can Pseudogap; it fits the identity conditions on antecedence in Gapping; and it gives an accounting of the scope differences between simple and complex Gaps.

Before moving onto more exotic Gapping constructions, it's necessary to consider how PREDICATE SHIFT applies in simple Gaps. Up to this point, I have suppressed the action of PREDICATE SHIFT in simple Gaps because the derivations it invokes are somewhat complex, and they also present a new problem.

There is no problem in generating simple Gaps of main verbs. These, in fact, will have precisely the syntax of complex Gaps. The surface parse in (219), for example, corresponds to "Some ate natto and others rice."

<sup>45</sup> Another of Barry Schein's examples.



The complications arise when an auxiliary verb or modal makes up the simple Gap. In these cases, it would be reasonable to expect the coördination to hold PredP, for otherwise PREDICATE SHIFT would move across-the-board and produce a complex Gap. But if the coördination holds PredP, then we might expect PREDICATE SHIFT to apply in each coördinate, and this would wrongly produce sentences such as (220), parsed in (221) on page ??.<sup>46</sup>

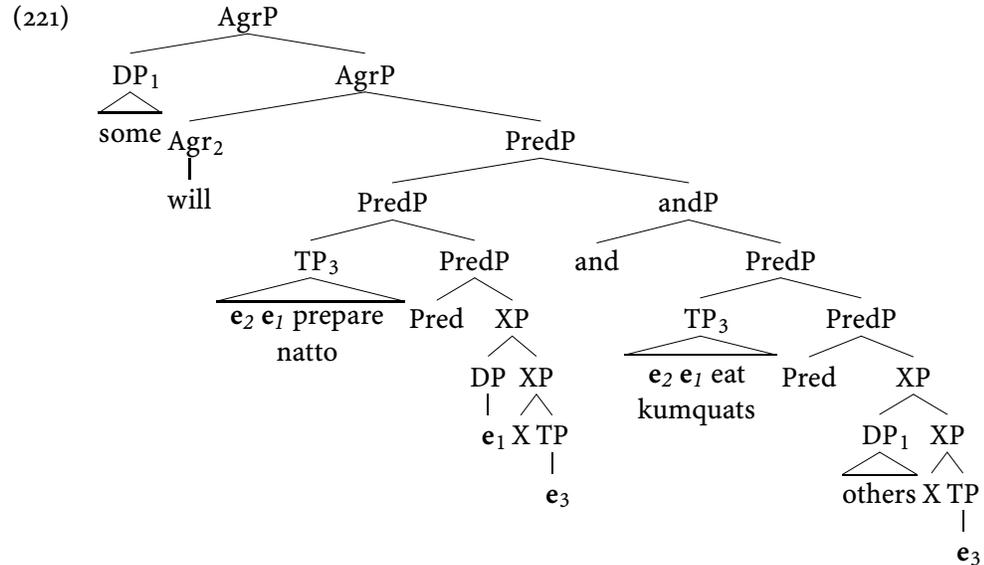
In fact, (221) is blocked by the conditions in ASSIGN CASE. Recall that coördinated phrases are phrases, and that ASSIGN CASE requires any term that is within a phrase that separates it from its Case assigner to get to the edge of that phrase. Because the highest function projection — now Agr<sup>0</sup> — is the nominative Case assigner in English, the subject in the right conjunct of (221) must migrate to the edge of that conjunct to be assigned Case. This hasn't happened in (221), however, and that's why this sentence is ungrammatical. Moreover, it can't happen in (221) because PredP is not a phrase to which Scrambling can adjoin things. (If it could we'd expect Scrambling to be able to position objects to the left of the surface position of VPs.) In fact, this consideration leads to the general conclusion that skewed coördinations cannot place Predicate Phrases within the coördination. There must be some other way in which simple gaps of modals and auxiliary verbs arise.

<sup>46</sup> In this parse, the object does not Scramble. Another way of getting the same string would involve Scrambling the object to a position higher than the subject. Still a third ungrammatical outcome would involve Scrambling both subject and object, but reversing their surface positions — this would produce “Some will prepare natto and eat others kumquats.” And finally, it might be expected that neither subject nor object could Scramble, producing a string that looks grammatical: “Some will prepare natto and others eat kumquats.” The method I will describe for blocking (221) will prevent all of these outcomes as well. The grammatical sentence has a different source.

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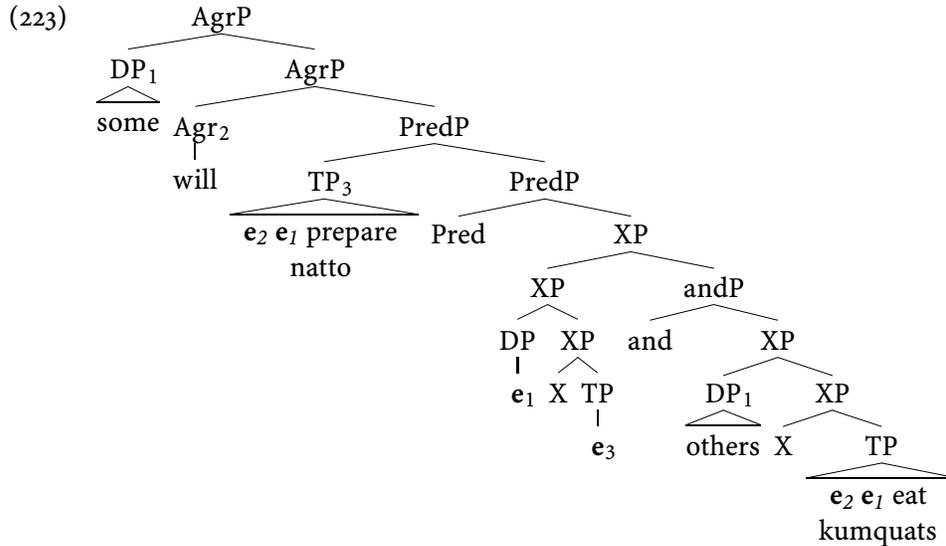
(220) \* Some will prepare natto and eat kumquats others.



What I propose is that simple Gaps have the same structure that complex Gaps do, but that PREDICATE SHIFT moves the PREDICATE in the first conjunct alone, rather than moving the PREDICATES in all conjuncts across-the-board. This would give the surface parse in (223) to the simple Gap sentence in (222) on page ???. This outcome is actually expected under a particular way of construing how the obligatoriness of PREDICATE SHIFT is triggered.

If we adopt the view that movement operations are driven by needs that terms in the landing site have, then the obligatoriness of PREDICATE SHIFT can be expressed as a requirement that Pred<sup>0</sup> has. One way of expressing this that has become common as a result of Chomsky's work is to give the relevant head "features" which require a term with matching features to become proximate before the sentence is given its overt form. In the present context, this scheme would require giving the list of phrases that PREDICATE SHIFT affects the feature [+predicate], and imbuing Pred<sup>0</sup> with the same feature. Let the relevant definition of proximate entail that the terms with matching features get into a Specifier-Head relation, and the movement of PREDICATES into the Specifier of PredP will be obligatory. In skewed coordinations, this requirement will be satisfied in either of the ways diagrammed in (224) on page ??, where  $\alpha P$  and  $\beta P$  should be understood as PREDICATES. The representation in (224a) corresponds to complex Gaps; and that in (224b) matches the parse in (223).

(222) Some will prepare natto and others eat kumquats.



The rest of the assumptions we've adopted also allow (224b) and (223). The Coördinate Structure Constraint does not prevent it since, recall, this constraint is satisfied if the term moved out of one conjunct either reconstructs (i.e., is interpreted inside the conjunct) or finds a variable to bind in the remaining conjuncts. Moved PREDICATES always reconstruct, so they will always satisfy the Coördinate Structure Constraint. Further, the conditions on ASSIGN CASE are satisfied in (223), since *others* has gotten to the edge of its conjunct, thereby bringing it within range of its Case assigner, Agr<sup>0</sup>. Indeed, under our present assumptions, this is the only way of producing a simple Gap of an auxiliary verb or modal and, as can be seen, it produces the correct word-order.

We also can now characterize the ungrammaticality of (195), repeated below, in such a way that it relates to the badness of (194), also repeated below.

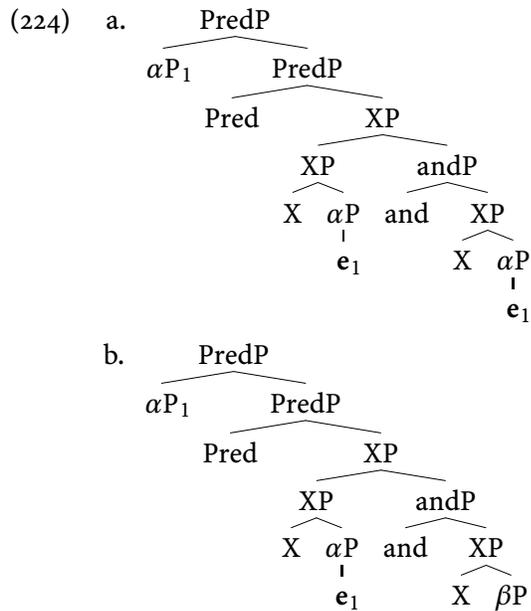
(??) ?\*Melissa has simultaneously tied her shoes and Tom his boots.

(??) ?\*Melissa simultaneously tied her shoes and Tom his boots.

What goes wrong in (194), recall, flows from the assumption that *simultaneously* must be introduced inside the PREDICATE that moves across the board to form the Gaps that have main verbs in them. Because this moved PREDICATE in (194) will be interpreted within each conjunct, so also will *simultaneously*, and this gives rise to its ungrammaticality. In (195), by contrast, the PREDICATE that *simultaneously* is part of moves out of the first conjunct only. As a consequence, *simultaneously*

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will be forced to be construed within the first conjunct, leading, again, to ungrammaticality. If the first clause is plural, as in (225), then the result is, as expected, fine.

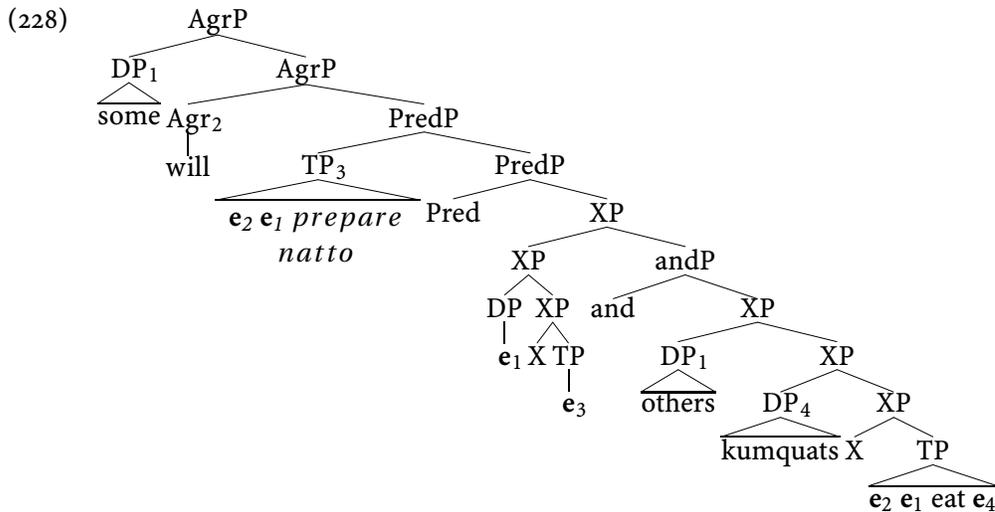
(225) Sally and Sue have simultaneously tied their shoes and Tom his boots.

Thus, the contrast between (195) and (226) flows from the fact that PREDICATES can be coördinated in (226), whereas something larger has cördinated in (195).

(226) Melissa has simultaneously tied her shoes and buckled her boots.

If this characterization of simple Gaps is correct, it reveals something very interesting. Because PREDICATE SHIFT has not relocated the PREDICATE in the right conjunct, we should expect to see what the order of constituents in English is like with the contribution of this process removed. In particular, then, we should be able to see whether Scrambling moves terms out of  $vP$  and places them to the left of this  $vP$  or to the right. I have left this question open, recall, but always placed Scrambled items at the left edge of their host in the hope of winnowing out counterexamples. Here, at last, we confront one. We do not find in this context the word-order that would be expected if Scrambled items could adjoin to the left. The parse in (228) on page ?? must be blocked, or examples such as (227) will be produced.

(227) \* Some will prepare natto and others kumquats eat.



A method for blocking leftward Scrambling in English must be found, then. We will return to this.

#### 1.4 Sundry applications

The previous sections have sketched the mechanism I propose to generate simple and complex Gaps. In this section I will explore a range of cases in which these mechanisms have a surprising, or less straightforward, application. The first of these are long-distance Gaps.

##### 1.4.1 Long distance Gaps

Ross (1969) introduced the paradigm in (229), the first examples of long-distance Gaps.

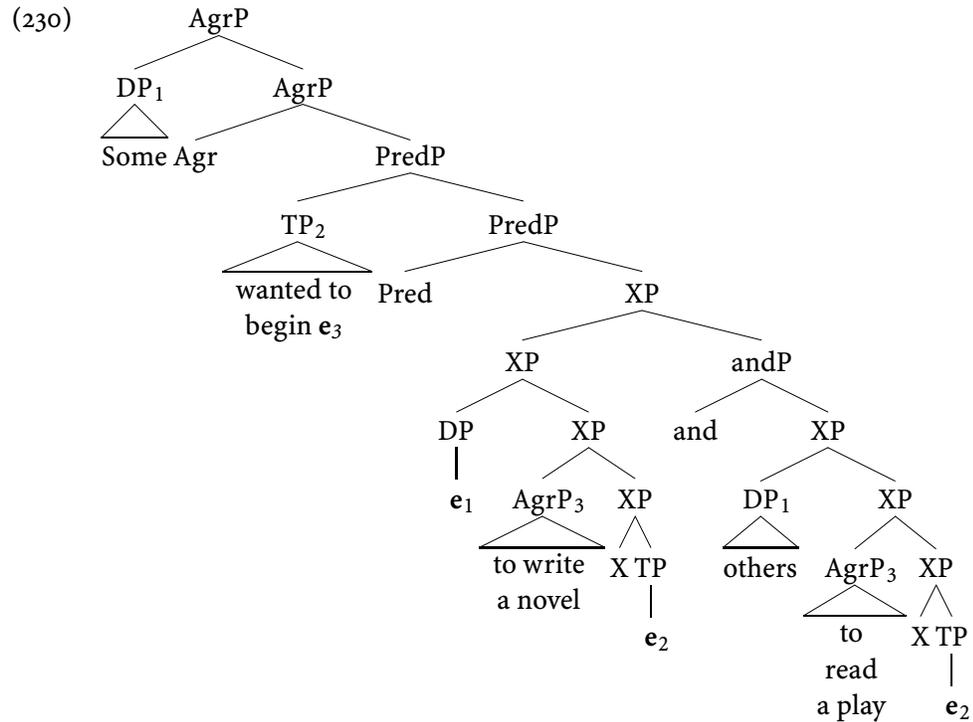
- (229)
- Some wanted to begin to write a novel, and others ~~wanted to begin to write~~ a play.
  - ? Some wanted to begin to write a novel, and others ~~wanted to begin to read~~ a play.
  - ? Some wanted to begin to write a novel, and others ~~wanted~~ to try to read a play.

The proposals made in the previous sections would give these cases a somewhat surprising derivation, but not one that presents any immediate problems. They

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would require that the infinitival or DP remnants scramble out of the embedded position, thereby producing a Gappable PREDICATE. Thus, for instance, (229b) would have the surface representation in (230).



It may be surprising to see infinitival clauses scramble long-distance in this way, but it is known to be possible in German and Dutch and so this is not outside the bounds of Germanic. It should be noted, nonetheless, that there is something strained to such cases, as indicated by the “?”s; and this carries over to the pseudo-gapping versions as well:

- (231) a. ?? I wanted to begin to write a novel, but I didn't  $\Delta$  to read a play.  
 b. ?? I wanted to begin to write a novel, but I didn't  $\Delta$  to try to read a play.

I don't know what the source of this awkwardness is; perhaps there is something that makes infinitival clauses resist this sort scrambling, or perhaps there is something that disfavors them being contrasted in the way that both Pseudogapping and Gapping require. This mysterious degradation will cloud our conclusions in this domain.

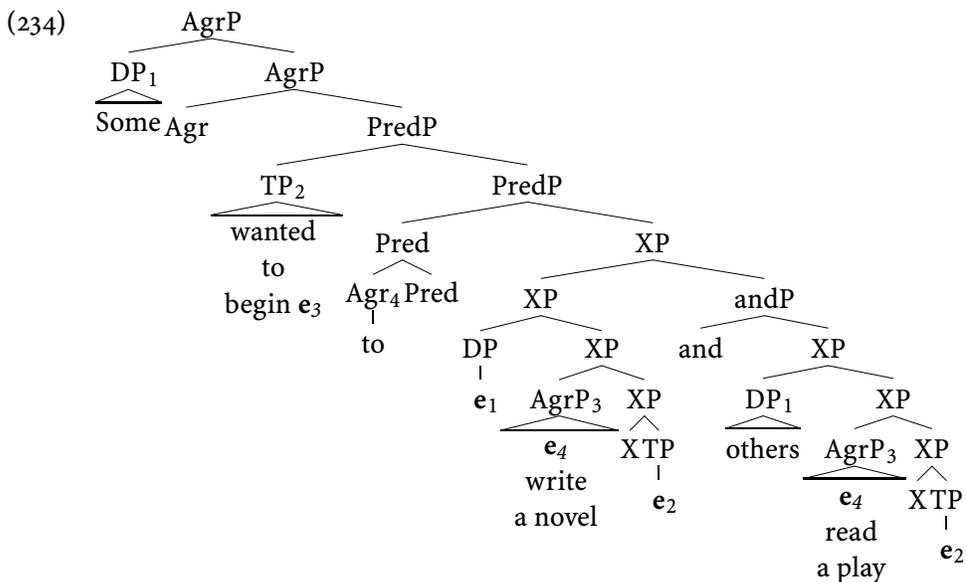
Long-distance Gaps with infinitival clauses as remnants may be a straightforward extension of the model we have described in the previous sections, but examples such as (232) are not.

- (232) a. Some wanted to begin to write a novel, and others ~~wanted to begin to~~ read a play.  
 b. ? Some wanted to begin to write a novel, and others ~~wanted to~~ try to read a play.

The puzzle here is that the most straightforward means of generating these would involve Scrambling the remnant VPs long distance, and there is evidence against this: Pseudogapping, for instance, is completely ungrammatical when VPs are remnants. (233) contrast with (231).

- (233) a. \* I wanted to begin to write a novel, but I didn't  $\Delta$  read a play.  
 b. \* I wanted to begin to write a novel, but I didn't  $\Delta$  try to read a play.

Here then is yet another environment in which Gapping and VP ellipsis qua Pseudogapping part ways. In the previous such cases, I suggested that the material which cannot elide but can Gap has moved across-the-board. In the present context, it's the deletability of the infinitival marker *to* that distinguishes Gapping and Pseudogapping, and so applying this hypothesis here would require moving the infinitival marker across the board. This might be done in the way shown in (234) on page ??, which derives (232a) from (230) by moving *to* across the board into Pred<sup>0</sup>. This amounts to the thesis that infinitival markers are capable in English of mov-



ing into a higher clause, a position that I do not know to have been successfully

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defended in the literature. It might be thought of as a way implement the thesis in Stillings (1975) that these examples come about by way of forming a kind of extended projection of the infinitival marker and the higher verb. If plain infinitival clauses aren't CPs, but are AgrPs instead, as in Bošković (1997), then the constraints on head movement would allow for the movement indicated in (234), so this be entertained at least as a possibility. Interestingly, infinitival CPs, as in (235), do not allow for this option.

- (235) a. \* Some wanted to ask how to write a novel, and others ~~wanted to ask how to~~ read a play.  
b. \* Some preferred for him to write a novel, and others ~~preferred for him to~~ read a play.

The proposal that *to* head moves across the board in these situations explains this, if the presence of  $C^0$  blocks Head Movement.

This account of *to* Gapping accounts for why it is not found in infinitival clauses are separated from the higher verb by another complement. This reflected in the contrast between (236), in which *to* Gaps, and (237), in which it doesn't.

- (236) a. \* Some believe her to know the solution and others ~~believe her to~~ want the solution.  
b. \* Some thought Sally to like kumquats and others ~~thought Sally to~~ prefer durian.  
c. \* Some consider spending to respond to the Fed's policies and others ~~consider spending to~~ drive it.  
d. \* Some told her to leave, and others ~~told her to~~ stay.  
e. \* Some asked her to leave and others ~~asked her to~~ stay.  
f. \* Some persuaded her to leave and others ~~persuaded her to~~ stay.  
g. ?? Some promised her to leave and others ~~promised her to~~ stay.  
h. \* Some seemed to me to have worked and others ~~seemed to me to~~ have slept.
- (237) a. Some believe her to know the solution and others ~~believe her to~~ want the solution.  
b. ? Some thought Sally to like kumquats and others ~~thought Sally to~~ prefer durian.  
c. ? Some consider spending to respond to the Fed's policies and others ~~consider spending to~~ drive them.  
d. Some told her to leave, and others ~~told her to~~ stay.  
e. Some asked her to leave and others ~~asked her to~~ stay.

- f. Some persuaded her to leave and others ~~persuaded her~~ to stay.
- g. Some promised her to leave and others ~~promised her~~ to stay.
- h. Some seemed to me to have worked and others ~~seemed to me~~ to have slept.

Interestingly, in none of these cases does it seem possible to Pseudogap the main verb and its first complement, leaving the infinitive behind as remnant; the examples in (238) are all unacceptable.<sup>47</sup>

- (238)
- a. \* I might believe her to want the solution, but I won't  $\Delta$  to know it.
  - b. \* I thought Sally to like kumquats, but I didn't  $\Delta$  to prefer durian.
  - c. \* I consider spending to respond to the Fed's policies, but I don't  $\Delta$  to drive them.
  - d. \* I told her to leave, but I didn't  $\Delta$  to stay.
  - e. \* I asked her to leave, but I didn't  $\Delta$  to stay.
  - f. \* I persuaded her to leave, but I didn't  $\Delta$  to stay.
  - g. \* I promised her to leave, but I didn't  $\Delta$  to stay.
  - h. ?\* She seemed to me to drink a lot, but she didn't  $\Delta$  to eat a lot.

This suggests that there is no constituent which includes the verb and first complement but excludes the infinitival complement in these cases; hence, *believe her*, *thought Sally*, *consider spending*, *told her*, etc. cannot have moved across the board to form the Gaps in (238). The instances of Gapping in (237), then, must be cases in which the verb and first complement Gap independently. We have already seen this for the small clause versions of the "raising to object" constructions in (237a-c) (see (139) on page ??). If the account given for the small clause cases is applied here, it would give a surface representation like that in (239) on page ?? to the raising to

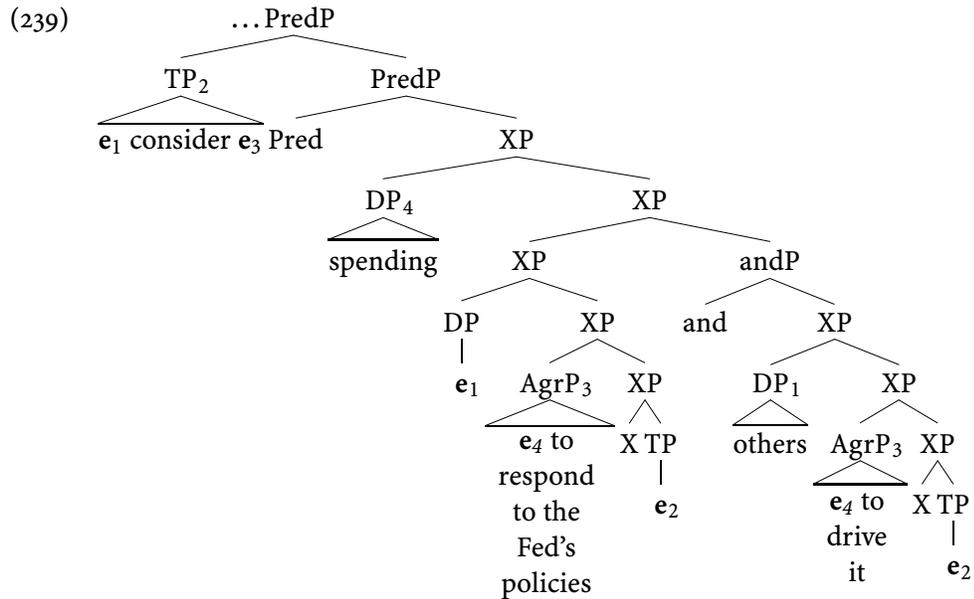
<sup>47</sup> It is possible, however, to Pseudogap the verb and infinitival complement leaving behind the first complement:

- (1)
- a. I might believe Jerry to want a solution, but I can't  $\Delta$  Carrie.
  - b. I thought Sally to like kumquats, but I didn't  $\Delta$  Maribel.
  - c. ? Some might think the economy to respond to the Fed's policies, but no one should  $\Delta$  our welfare.
  - d. I told Sally to leave, but I didn't  $\Delta$  Maribel.
  - e. I asked Sandy to leave, but I didn't  $\Delta$  Sean.
  - f. I persuaded Turin to leave, but I didn't  $\Delta$  Steve.
  - g. I promised Charles to stay, but I didn't  $\Delta$  Satoshi.
  - h. She seemed to the drink a lot, but she sure didn't  $\Delta$  to the boys.

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object cases. To form (239), the subjects and infinitival complements of both con-



juncts have Scrambled out of TP, leaving just the main verb as remnant. This TP moves across the board into Specifier of Predicate Phrase, thereby Gapping *consider*. The accusative Case marked subject of each embedded infinitive also Scrambles across the board, and in this way also Gaps. And, finally, the subject of the first conjunct moves asymmetrically out of the first conjunct into Specifier of the root AgrP (which is not shown in this diagram).

This sort of derivation must underlie the Gaps in (237d-h) too, if, as the evidence from Pseudogapping suggests, they have the same constraints on constituency that the “raising to object” situations do. An example like (237c), for instance, would have a surface parse like that in (240) on page ??.

What these parses illustrate is that the first complement in these situations must Scramble out of the coördination independently if it is to Gap, and the infinitives must be stranded within the coördination if they are not to. As a consequence, if the infinitival marker *to* follows the first complement it must be within the coördination. Therefore, if *to* Gapping comes about by moving *to* across the board out of the coördination, as proposed, it cannot simultaneously Gap and follow the first complement. This is precisely what has happened in (236), and that is why they are ungrammatical.



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As noted in the introduction, it is possible for the Gap to include the verb and all of its complements as in (242).

- (242) a. Gary sang, and Sam also.  
b. Betsy left with me, and Mittie too.  
c. Julie wanted to go along, and Liz as well.

These constructions are sometimes analyzed as extraposition of a phrase made up of *and* and the phrase that follows it; see Ross (1967), Munn (1993) and Zoerner (1995, 5.3.2.3) for some examples. Under this account, the cases in (242) are derived from those in (243).

- (243) a. Gary and Sam sang.  
b. Betsy and Mittie left with me.  
c. Julie and Liz wanted to go along.

But as Hudson (1976) observes, this is improbable given the difference in grammaticality of (244a) and (244b).

- (244) a. Betsy and Mittie simultaneously left with me.  
b. \* Betsy simultaneously left with me and Mittie too.

Let's therefore regard these as instances of Gapping.

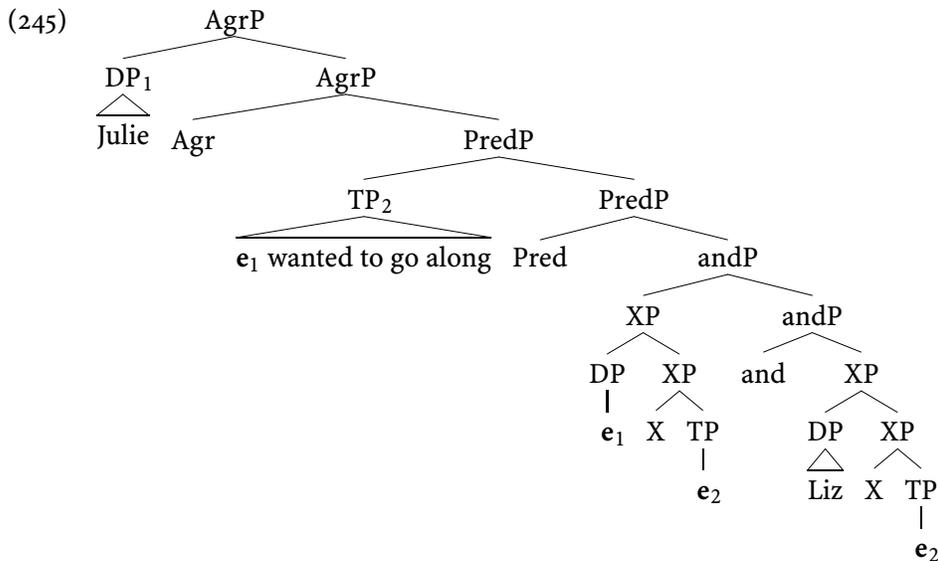
Indeed, the account of Gapping offered here can produce Gaps of this size. All that's required is for the Predicate which moves across-the-board to have not been emptied by Scrambling before it moves. In (242c), for instance, the Predicate made up of *wanted to go along* can have moved across-the-board to form something like (245) on page ??.

Another way in which Gapping may vary from the pattern of Subject+Remnant that earlier sections kept to is found in cases where the subject itself Gaps; some examples are found in (246).<sup>48</sup>

- (246) a. Two days ago John took Mary out to dinner and this afternoon ~~John took Mary out~~ to the movies.  
b. On Monday I bought a car, and on Tuesday ~~I bought~~ a motorcycle.  
c. On Tuesday, Sam must have seemed happy, and on Wednesday, ~~Sam must have seemed~~ sad.

These cases exploit the fact that the subject begins within the PREDICATE which moves across-the-board to form Gaps. In our previous examples, the subjects of

<sup>48</sup> (246a) is Kuno (1976, (31a): 307); (246b) is Oirsouw (1987, (158): 146); and (246c) is Sag (1980, (3.4.16): 266).



each of the conjuncts escaped the PREDICATE before it moved. But in (246), the subjects remain in the PREDICATE and move out only after across-the-board movement. (246a) gets a surface representation like that in (247) on page ??, for example.

A similar derivation might underlie (248), from Pesetsky (1982).

- (248) Bill asked which books I gave to Mary and which records I gave to John.  
(Pesetsky 1982, (126):646)

In this case, we will have to assume that the *wh*-phrase of the second conjunct has not moved into Specifier of CP, as might be otherwise expected, and is instead adjoined to XP, like *on Tuesday* is in (247).

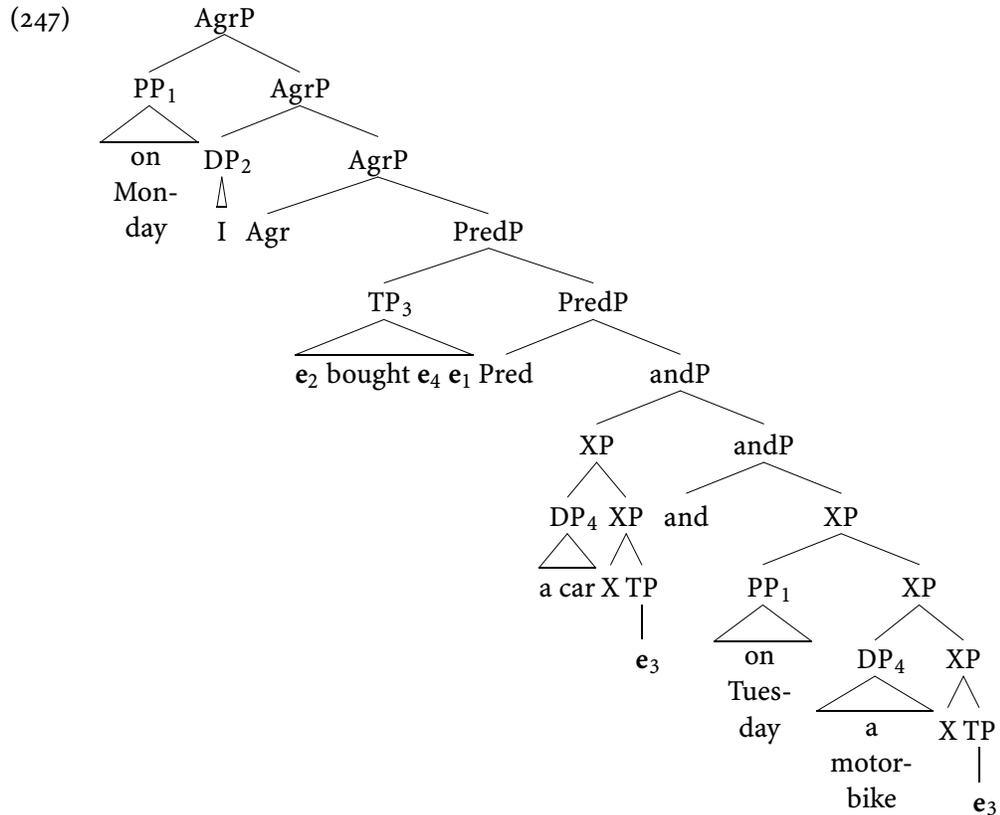
A peculiarity of the examples in (246) and (247) is that the subject of the left conjunct is preceded by either a topicalized phrase or a *wh*-phrase. But there is nothing about the account offered for these examples that requires this, and in fact cases abound where this peculiarity is absent; (249) are candidates.

- (249) a. I gave a book to Will and I gave a carving knife to Carrie.  
b. Stephanie will eat pickles today, and Stephanie will eat ice-cream tomorrow.

These examples are sometimes classified as “Forward Conjunction Reduction,” but the treatment of them here employs across-the-board movement in the same way that Larson (1988); Larson and May (1990) does. The innovation introduced here is

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only that the subject+verbal string moves across-the-board as a unit, rather than piecewise.

The strategy employed for (249) might be extended to cases like (250).

(250) I read a book to Betsy and a magazine.

As in (242), examples such as these are analyzed by Munn and Zoerner as deriving from (251) by way of Extraposing *and a magazine*.

(251) I read a book and a magazine to Betsy.

But this seems unlikely, given the difference in (252).

- (252) a. They introduced Carrie and Will to each other.  
 b. \* They introduced Carrie to each other and Will.

Instead, (250) and (251) could be seen as instances of Gapping, as in (253).

- (253) a. I read a book to Betsy and I ~~read~~ a magazine ~~to Betsy~~.  
 b. \* They introduced Carrie to each other and ~~they introduced~~ Will ~~to each other~~.

As in (247), the PREDICATE which moves across-the-board in these examples carries with it the subject; but unlike (247), it also carries along the *to*-phrase, leaving only a direct object as remnant. This account, then, explains ungrammaticality of (252b), as it does not provide a suitably plural antecedent for *each other* in either of the conjuncts of (253b).

Finally, there are situations in which the Gap leaves subject and object remnants, but in reverse order, as in Hankamer's (254).

- (254) The beans, Harry cooked, and the potatoes, Henry.  
 (Hankamer 1979, (35): 151)

Unlike the cases in (246), these are sensitive to the order of correlates in the left conjunct. For the subject remnant to be preceded by another remnant, the subject correlate must be similarly preceded by a topicalized correlate. This is the source of the ungrammaticality of (255).

- (255) \*Harry cooked the beans, and the potatoes, Henry.

An adequate account of these cases goes beyond what I am presently able to produce. Under the proposals made here, what seems to be required is a way of relaxing the requirement that the subject be at the leftmost edge of the coordinate just when a topicalized phrase occupies this position.

## 1.5 Alternatives and problems

The account proposed in the previous sections tries to resolve several of the peculiarities of the Gapping construction into across-the-board movement. Central among these peculiarities are (i) the fact that Gapping is restricted to coördinations, (ii) Gapping affects a wider class of strings than does VP ellipsis and Pseudogapping and (iii) Gapping invokes scopal relations that are not found in parallel ellipsis constructions. In addition, it tries to get a better image of the identity conditions that match a Gap with its antecedent by grounding them in the conditions that allow two or more phrases to be moved across the board.

This story is assailable at a variety of points. The claim that Gapping is restricted to coördinations, for instance, might be challenged by pointing to examples such as (256).

Who ate what?

- (256) Jerry, beans and Sandra, rice.

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It's clear that (256) is not a continuation of the question it answers; it is an independent sentence which lacks its verbs in a way that is symptomatic of Gapping. We cannot analyze this as an instance of a single sentence spread across two speakers in the way that was suggested for other cases where Gapping appears to find antecedents from discourse.

There are some differences between this phenomenon and Gapping, however, that suggest we are confronted by a different process in these cases. The island sensitivity that Gapping has, for instance, seems to be lost in answers like (256). The instances of Gapping in (257) differ from the Gap-like answers in (258).

- (257) a. \* Some said that Mittie liked beans and others ~~said that Mittie liked~~ rice.  
b. \* Some left in order to meet Mittie and others ~~left in order to meet~~ Sam.
- (258) a. Who said that Mittie liked what?  
Sam, beans and Betsy, rice.  
b. Who left in order to meet who?  
Sam, Betsy and Mittie, Liz.

And Gap-like answers are able to appear within embedded contexts, which, as we've seen, is forbidden for Gapping; this is illustrated by the contrast in (259) and (260).

- (259) Who married who?  
I think Sam, Mittie and Liz, Vinnie.
- (260) \* Sam married Mittie and I think Liz ~~married~~ Vinnie.

Perhaps it is safe to set these cases aside, for the moment, and hope that their analysis does not undermine the claim that Gapping is confined to coördinations.

Another plausible counterexample to this claim is found in comparative constructions, such as (261).

- (261) Jill ate more beans than Sam ~~ate~~ rice.

Lechner (1998, 2001) shows in some detail that these constructions do, in fact, employ the same operation that underlies Gapping. If this is correct, then these unavoidably undermine the claim that Gapping is restricted to coördinations. The only way to resolve these cases to the proposals made here that I can see is, as Lechner suggests, to let the comparative construction also license across the board movement in the same fashion that coördinations do. It is, afterall, still an open question what permits across the board movement, and therefore where it should be expected.

- (262) About what did Mary talk more than Jerry explained.

- (263) a. Who did some send apples to and others pairs?  
b. What did some buy books about and others pictures of?

Perhaps the weakest point upon which the account stands is its treatment of the peculiar scope facts. The essential ingredient in that account is that the phrases brought together in the Gapping construction are smaller than full clauses. This is what stands behind the fact that material at the left periphery of the initial clause is capable of having the following clauses in its scope. Indeed, on this account, the relative smallness of the phrases brought together is the defining attribute of Gapping constructions. It is this that allows material that moves leftwards in English to move across-the-board and create the Gaps. It is troubling, therefore, that there are several cogent arguments in the literature against this ingredient. There are a range of phenomena that speak towards letting the phrases that are joined in Gapping constructions be relatively large.

One set of phenomena that point towards



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