CHAPTER 3

V2 and Holmberg’s Generalization

3.1 Introduction

The standard (symmetric) analysis of verb second (V2) ([Holmberg and Platzack 1995, den Besten 1989] is that the finite verb (Vf) head-moves to the highest functional projection of the clause. Then some other constituent, for instance the subject or an adverbial, has to move to the specifier of that same projection. These two movement steps, in addition to a general ban on adjunction to CP, ensure that Vf will always end up in the second position of the clause.

It is the purpose of the present chapter to argue against a head movement analysis of V2. The main argument for an XP-movement analysis will come the fact that certain (apparent) V2-violations in Mainland Scandinavian seem to pose severe problems for a head movement analysis. The problematic data involve focus particles that can intervene between the finite verb and the first constituent. It will be argued that these cannot be treated as a clitic on the verb and that the V2 violations are real. The interaction between V2 violations with focus particles and argument shift of weak pronouns will be used to show that the verb does not move to second position as a head. From this conclusion it follows that weak pronouns, in fact, do not shift. When they appear to have moved, it is a larger constituent containing the VP that has moved.

1Sections 3.2–3.5 will appear as Nilsen (to app.h). The remaining sections, including the “third approximation” were developed after submission of that paper.
Thus, pronoun shift and V2 is treated as surface reflexes of one and the same operation. This gives a very simple explanation for Holmberg’s Generalization to the effect that object shift cannot cross phonetically realized material from the VP; it cannot do so because it is the VP itself, or rather an XP containing it, that moves.

The traditional view of V2 is also challenged by the fact that there are topicalization-like processes and wh-movement effects that seem to require a sentence internal landing site. Furthermore, some facts concerning subject-verb inversion are problematic for the standard treatment of V2. Inversion is usually analyzed as V-to-C movement, with the subject in spec-IP or equivalent position. This leads to the expectation that it can only occur when the verb really is in C. However, there are cases in which the verb is arguably much lower than this, and the subject still has to follow it.

The proposed account builds on recent work by Kayne (1998, 1999), Cinque (1999), Rizzi (1997), Koopman and Szabolcsi (2000) and others. In particular, no covert movement is used, all movements are to the left and the analysis relies heavily on the use of ‘remnant’ movement, i.e. movement of a constituent containing a trace. More specifically, the proposal is that Rizzi’s (ibid.) functional projections FocP, TopP and FinP are merged below sentential adverbs. V2 consists in successive raising of TopP around sentential adverbs, carrying the verb-initial FinP along. One of the key features of the analysis is thus that it renders V2 sensitive to the properties of individual classes of adverbs. Finally, it is argued that it may be possible and advantageous to treat V2 phenomena without reference to functional projections, such as FocP, TopP, FinP, etc.

The chapter is organized as follows. In section 2, the basic data concerning the V2 violating focus particles and their interaction with pronoun shift is presented. Section 3 presents a first approximation to an analysis that can handle the facts. Section 4 suggests that the problems encountered with the first analysis is that fronting operations and S-V inversion should be able to access quite low positions. In section 5 the main proposal is developed. Section 6 sums up and concludes.
3.2 Some data

3.2.1 V2-violations with focus particles

As has been discussed by Egerland (1998), there exist certain apparent exceptions to the V2-generalization in Mainland Scandinavian involving so-called ‘focus-sensitive adverbs’ or ‘focus particles’ (henceforth fpt). The phenomenon is illustrated in (119) below with data from Norwegian.

(119) a. Jens bare gikk.
   J just left

b. Jens nesten gråt.
   J almost cried

It is also possible to have the fpt after Vf, as in (120). Neither of the two orders appear to be marked or degraded in any way.

(120) a. Jens gikk bare.
   J left just

b. Jens gråt nesten.
   J cried almost

Other expressions that exhibit the same behavior include til og med ‘even’ (lit. "to and with"), minst ‘at least’ utelukkende ‘exclusively’ ikke mer enn såvidt ‘not more than barely’, simpelthen ‘simply’. Thus we are not dealing with a quirk of a couple of words. Below are examples.

(121) a. Han til og med leste den.
   he even read it

b. han utelukkende sover hele dagen
   he exclusively sleeps whole the-day

c. Han ikke mer enn såvidt berørte den.
   he not more than barely touched it

d. Han simpelthen tok den.
   he simply took it

Egerland (ibid.) notes that with nesten there is a truth-conditional difference corresponding to its different positions. Consider the following examples.

(122) a. Jens nesten brølte hurra.
   J almost roared hooray

b. Jens brølte nesten hurra.
   J roared almost hooray
\[122a\] can only mean that Jens pronounced the word "hurra" in a manner that almost qualifies as roaring it. Let us refer to this as the 'manner' reading. The most salient reading of \[122b\] is that he didn’t cry "hurra", although he was about to, i.e. a 'modal' reading. It can also get the manner meaning if pronounced with heavy stress on the verb. See Rapp and Von Stechow (1996) for discussion of these and other readings of the German adverb fast (‘almost’). This pattern can also be taken to indicate that the fpt is not adjoined to C’, since the manner reading presumably results from attaching the adverb lower, not higher, than the site responsible for the modal reading.

Egerland (ibid.) analyzes this phenomenon in terms of the Universal Hierarchy of functional projections proposed in Cinque (1999). The cases involving nesten and those involving bare are given different analyses. Egerland maintains a standard analysis of V2 in terms of head movement to the highest FP in the clause (ForceP in the 'split CP' framework of Rizzi (1997)). He analyses the adverb nesten (‘almost’) as a specifier of a modal projection in the IP-layer. For \[122a\], he claims that Vf can remain in or below that modal head when nesten is in its specifier. The adverb bare ‘only,’ ‘just’, he treats as a syntactic clitic on Vf. The analysis of bare as a clitic is supported by two facts. The first is that the adverb can be phonetically reduced into the monosyllabic ba’ in Swedish (not possible in Norwegian).

\[(123)\] Per ba’ gick. [Swe]

\[P\] just left

The second argument is that, according to Egerland, bare cannot appear in front of auxiliaries.

\[(124)\] * Per bara/ba’ har gått. [Swe]

\[P\] just has left

The same applies to Norwegian as long as the example is read with neutral intonation, but if the auxiliary is stressed \[125\], the result is much better; also if a less semantically impoverished auxiliary is used \[126\].

\[(125)\] Jens bare HAR gått.

\[J\] just has left

"It just IS the case that Jens has left."

\[(126)\] Jens bare måtte gå.

\[J\] just must-past leave

"Jens just HAD TO leave."

There are other problems with assuming that bare is a clitic. First, it can be modified. If one does not take simpelthen in \[127\] to directly modify bare, the example would present the same kind of problem as \[128\] below.

\[(127)\] Jens simpelthen bare gikk.

\[J\] simply just left
After Kayne (1975), one of the defining characteristics of syntactic clitics has been taken to be that they cannot be modified. Secondly, other adverbs that cannot plausibly be taken to modify bare can also precede Vf when bare does; in fact, only when bare does.

(128)  
a. Jens vanligvis bare svarer ikke.  
   J usually just answers not  
b. *Jens vanligvis bare svarer ikke.  
   J usually answers not

This points to the conclusion that bare should be treated on a par with nesten ‘almost’, so that, when these adverbs are present, Vf can remain in a low position in the IP-field. If the position of bare is lower than that of vanligvis, we can also explain why the latter adverb actually has to precede Vf when bare does. Compare (129) to (128a):

(129) *Jens bare svarer vanligvis ikke.  
    J just answers usually not

Since the negation must follow Vf in the relevant construction, it cannot be regarded as V-in-situ, either. This is illustrated in (130).

(130)  
a. Jens bare liker ikke fiskekaker.  
    J just likes not fishcakes  
b. *Jens bare ikke liker fiskekaker.  
    J just not likes fishcakes

So far, we can conclude that V2-violating bare is not a clitic on Vf; that bare occupies a position lower than vanligvis ‘usually’; and that Vf can remain below that position when bare is present, although it cannot remain in situ.

3.2.2 Pronoun Shift

In the next few paragraphs, we will see that there are reasons to think that V2 does not involve head movement of Vf, but rather movement of a phrasal category. A corollary of our observations will be that weak pronouns, in fact, do not shift. In the discussion of weak pronouns, we use the phonetically reduced forms ‘n he/him/it’ and ‘a she/her/%it’ since these are unambiguously weak: they must shift to the left. Consider the pattern below.

2Some dialects use ‘a to replace all feminine nouns, including inanimates. These dialects typically use the “personal” pronouns for inanimates, also in their unreduced forms, like in (i), although, if the pronoun in (i) is prosodically stressed, it must refer to a person Cardinaletti and Starke (1995).

(i) Hu ligger på bordet.  
    She lies on the-table  
    “It [the book] is lying on the table”  
Other dialects (including my own) use ‘n for inanimates, regardless of gender.

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In (131) we see that when the subject and the object are both realized as weak pronouns, they must remain immediately right-adjacent to the verb. In (131a), the verb+arguments complex remains below the position of *bare*, whereas in (131b), the entire complex is moved around *bare* and *vanligvis* to the second position. (131c)-(131d) are added to show that the complex cannot be split up. This seems to indicate that it is moving as a constituent. The alternative would be to say that the verb and the arguments move separately, but that the verb somehow blocks further movement of the pronouns (cf. the Shortest Move/Minimal Link Condition Chomsky (1995)). One would need an extra landing site for the pronouns, higher than the negation, but lower than the other adverbs. The pronouns would move as high as they could without crossing the verb in the overt syntax, and then proceed to the higher position(s) covertly. The features attracting the pronouns to the higher positions would have to be ‘optionally strong.’ It is obviously simpler to say that the Vf and the pronouns are moving as a constituent. That analysis obviates the need for extra landing sites and optionally strong features.

Taking V2 to be derived by XP-movement, we arrive at the following result:

**Generalization 1 Weak pronouns do not shift.**

When a weak pronoun appears to have moved across adverbs, it is something else containing the pronouns that has moved. Consider now the following pattern where the subject and the object appear to be moving as a constituent without Vf.

(132) a. Derfor svarte Jens ’a vanligvis ikke. therefore answered J her usually not

b. Derfor svarte vanligvis ikke Jens ’a. therefore answered usually not J her

c. * Derfor svarte Jens vanligvis ikke ’a therefore answered J usually not her

d. * Derfor svarte ’a vanligvis ikke Jens. therefore answered her usually not J

The subject and the weak, pronominal object can follow the adverbs as long as they remain adjacent. In Swedish, (132c),(132d) are also possible. The two
arguments need not remain adjacent in that language. In Danish, only (132a) is grammatical. For Norwegian, then, the subject and the object seem to make up a constituent in these examples.

Assuming that pronoun shift actually does not exist squares well with one of the fundamental properties that pronoun shift appears to have: No effect. It has been noted in the literature that pronoun shift does not create new binding possibilities, it does not license parasitic gaps, it does not block wh-movement (relativized minimality), it does not interfere with passivization (relativized minimality); in short, it has no effect at all. This obviously supports generalization [1].

3.3 First approximation

A simple way to derive these constituents, which will be shown to be inadequate shortly, would be to assume the following. There is an XP dominating VP into which Vf always moves. This XP, in turn, moves to spec-Fin prior to fronting of some constituent to spec-Top. The derivations would go as in derivation [3.1] and [3.2] ignoring the base position of the adverbial derfor (‘therefore’). Phonetic material is in boldface and cyclicity is ignored in this derivation. This gives us

**Derivation 3.1**

\[
\text{TopP Top [FinP Fin [IP not [XP he answered her]]]]}
\]

\[
\text{moves to X} \uparrow
\]

\[
\text{TopP Top [FinP Fin [IP not [XP answered, +X [VP he t, her]]]]}
\]

\[
\text{XP moves to spec-Fin and some constituent topicalizes} \uparrow
\]

\[
\text{TopP therefore Top [FinP [XP answered, +X [VP he t, her]] Fin [IP not tXP]]}
\]

the verb+arguments constituent we demonstrated in (14) above. If the subject bears focus, the remnant VP is extracted into the IP-field prior to movement of XP to spec-Fin.

Thus the constituent made up by the subject and the object in (15) is the remnant VP. If bare is merged into the IP, it attracts XP (cf. Kayne 1998). In this case, either XP or IP moves further up to spec-Fin.

3.3.1 Problems

One of the attractive features of an analysis along these lines is that, prima facie, it seems to explain Holmberg’s Generalization.

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[^3]: A similar point will be made below for movement of Vf to “second position”.
Generalization 2 (Holmberg (1986, 1999) (HG))  

Argument shift cannot cross any phonetically realized material from the VP, i.e. the verb, a verbal particle, a dative preposition, or other arguments of the verb, although it can cross traces of these, as well as sentential adverbs.

Employing a non-movement analysis of argument shift, HG seems to follow trivially. Weak pronouns cannot cross any phonetically realized material from the VP, simply because it is the VP itself (or something bigger) that moves. Unfortunately, the explanation offered of HG from this account breaks down when one looks at the system more closely. This is because of what would happen in non-V2 contexts. Vf would presumably move to X in these contexts as well, and then nothing prevents the remnant VP to scramble into IP, yielding ungrammatical orders such as the following.

(133)  

a. * . . . at Jens’a ikke svarer  
   . . . that J her not answers

b. * . . . at Jens ikke fiskekaker liker.  
   . . . that J not fishcakes likes

In order to prevent such orders, we would have to make extraction of VPs or objects from XP somehow contingent upon subsequent raising of XP to spec-Fin. That is, we would have to reintroduce a notion of HG which is what we set out to derive.

Similarly, one would need to account for the unavailability of subject-verb inversion in non-V2 contexts with weak pronominal subjects. Suppose that the finite subordinator at ‘that’ is generated in Fin and somehow blocks XP-to-spec-Fin movement as well as topicalization. As it stands, our account would lead to the incorrect expectation that the following order should be grammatical with the structure in (134b).

(134)  

a. * . . . at ikke svarte ’n ’a  
   . . . that not answered he her

b. [TopP Top [FinP that Fin [IP not [XP answered, +X [VP he t, her ]]]]]
Another problem is that it is not clear that the account explains root-V2. The extent to which it succeeds in doing so depends on whether TopP is the only projection dominating FinP. In e.g. Rizzi (1997), which is where the names TopP, FinP originate from, two other FPs are postulated, both of which dominate FinP, i.e. FocP and ForceP. Thus, either we would have to show that these projections do not exist, or that, for independent reasons, they cannot be filled in the relevant cases. These considerations are taken to show that a more radical departure from standard assumptions is needed.

3.4 More data: how initial is the initial position?

Before we turn to our second approximation to the proper analysis of V2, some data will be reviewed that purport to show that the initial position, i.e. spec-CP in traditional analyses, need not be construed as a base-generated initial position. The evidence we will review suggests that operations like wh-movement and topicalization are done in (at least) two separate movement steps, one targeting an IP-internal position, and a second one whose nature we try to elucidate in the remainder of the chapter. Consider the following contrasts:

(135)  a. Al very probably won.
       b. * How probably did Al win?
       c. How probable is it that Al won?

(136)  a. Al quite possibly won.
       b. * How possibly did Al win?
       c. How possible is it that Al won?

(137)  * How [probably/possibly/fortunately/necessarily/evidently/maybe/frankly/usually] did Al win?

It seems that wh-movement of higher adverbs (cf. Cinque 1999) is systematically impossible. This contrasts with the behavior of lower adverbs, which do allow this kind of movement:

(138)  How [quickly/effortlessly/often/soon/frequently] did Al win?

Given that degree modification of the higher adverbs is possible (cf. (135a, 136a)), and that the adjectival counterparts of, e.g. (138) (i.e. "how fortunate/usual/... is it that...") are grammatical, it seems that we are dealing with a syntactic phenomenon, rather than a (purely) semantic one. This suggests that wh-movement is a composite operation, consisting of two parts: One movement step targeting a relatively low, "IP-internal" position, call it P1 and
another step targeting the first position of the clause, (P2). If P1 is generated lower than adverbs like probably, the ungrammaticality of examples like (138) would follow from the Extension Condition (Chomsky (1995)). In other words, the only way for them to obey the Extension Condition would be to merge with P1, the wh-position directly, and then raise to their base-position.

There are some indications that the same reasoning applies to topicalization. That is, there are topicalization-like processes that seem to target an IP-internal position in embedded clauses only. One case in point is so-called ‘stylistic fronting’ in Icelandic (cf. a.o. Holmberg (2000)).

Another embedded, "IP-internal" topicalization process is illustrated by the following Norwegian examples. These may seem slightly contrived, but the contrast between (139b) and the other two is quite sharp. In (139a), we see an adverbial modifier (bak læven), modifying the most deeply embedded predicate, but appearing displaced from it, in the mittelfeld of the next clause up. In (139b) we see that this kind of displacement is unavailable if the target is the root clause. In this case, the displaced adverbial will appear in the very first position, as illustrated in (139c).

(139) a. Det jeg sa var at jeg bak læven aldri har skjønt hvorfor han plantet tulipaner.
what I said was that I behind the-barn never have understood why he planted tulipaner.
b. *Jeg har bak læven aldri skjønt hvorfor han I have behind the-barn never understood why he planted tulipaner.
planted tulipaner.
c. Bak læven har jeg aldri skjønt hvorfor han behind the-barn have I never understood why he planted tulipaner.
planted tulipaner.

It is tempting to say that bak læven is, in some sense in the "same position" in (139a) and (139c). Yet another indication that something is wrong with the standard view of the left periphery is what appears to be obligatory subject-verb inversion in a quite low position. Consider the following Norwegian examples where the object has been topicalized around a V2-violating fpt.

(140) a. Meg vanligvis bare svarte ikke Jens. me usually just answered not J
b. Meg vanligvis bare svarte Jens ikke. 
me usually just answered J not

It is tempting to say that bak læven is, in some sense in the "same position" in (139a) and (139c). Yet another indication that something is wrong with the standard view of the left periphery is what appears to be obligatory subject-verb inversion in a quite low position. Consider the following Norwegian examples where the object has been topicalized around a V2-violating fpt.
3.5 Second approximation

Given the discussion in section 2, it appears that Vf cannot be in C. One could try to say that, in (140a), the subject is inside VP. This would not work for (140b), since here, the subject precedes the negation as well. Thus, the standard ‘V-to-C’ analysis of subject-verb inversion cannot handle this phenomenon. The same point could be made with 'distributive' conjunctions like (141) (cf. Zamparelli 2000).

(141) a. Meg vanligvis både slo de og sparket. me usually both beat they and kicked
   "They usually both beat and kicked me."

b. *Meg vanligvis både de slo og sparket. me usually both they beat and kicked

c. *Meg vanligvis de både slo og sparket. me usually they both beat and kicked

d. *Meg de vanligvis både slo og sparket. me they usually both beat and kicked

For reasons of space, we will not enter into a discussion of distributive conjunction here. We refer the reader to Zamparelli’s work for an analysis that is congenial to the analysis to be presented here.

3.5 Second approximation

Taking our conclusions so far quite literally, we arrive at the following picture of ‘clausal architecture’:

(142) \[\text{advP advp} \ [\text{adv}^{*} \ [\text{WP} \ [\text{FocP} \ [\text{TopP} \ [\text{FinP} \ VP]]]]]\]

Here, the heads Foc, Top, Fin are the ones argued for by Rizzi (1997). W is the head introduced by Kayne (1998) to deal with scope phenomena involving the fpt only. We do not invoke Rizzi’s (ibid.) head ‘Force’, mainly because it is not necessary for our purposes. Adverbs attract TopP to their specifiers. We assume that, in case nothing is focus, or the entire sentence is, TopP is attracted to spec-Foc, and subsequently to spec-W. Thus in these cases, the sequence W, Foc will simply be omitted. Let us see how the system works by going through some derivations.
3.5.1 Root clauses

We begin by deriving simple root clauses like the following.

(143) Jens svarte meg vanligvis.

\[ \text{J} \quad \text{answered} \quad \text{me} \quad \text{usually} \]

Derivation 3.3

\[ [\text{VP} \ \text{John} \ \text{answered} \ \text{me}] \]

merge Fin and move V ▶

\[ [\text{FinP} \ \text{answered} \ [\text{VP} \ \text{John} \ \text{me}]] \]

merge Top and move John ▶

\[ [\text{TopP} \ \text{John} \ [\text{FinP} \ \text{answered} \ [\text{VP} \ \text{me}]]) \]

merge usually and move TopP ▶

\[ [\text{AdvP} \ [\text{TopP} \ \text{John} \ [\text{FinP} \ \text{answered} \ [\text{VP} \ \text{me}])] \ \text{usually}] \]

In this derivation, the entire sequence John answered me climbs around the adverb. The only movement step which is always necessary is movement of Vf to Fin. The object could also have moved to spec-Top. In that case, the subject would either remain in-situ, or move to spec-Foc.

Consider now a sentence with an indefinite object noun phrase. In these, the indefinite will move to spec-Foc, prior to movement of TopP to spec-W.

Derivation 3.4

\[ [\text{VP} \ \text{John} \ \text{read} \ \text{a book}] \]

merge Fin and move V ▶

\[ [\text{FinP} \ \text{read} \ [\text{VP} \ \text{John} \ \text{a book}]] \]

merge Top and move John ▶

\[ [\text{TopP} \ \text{John} \ [\text{FinP} \ \text{read} \ [\text{VP} \ \text{a book}]]) \]

merge Foc and move a book ▶

\[ [\text{FocP} \ \text{a book} \ [\text{TopP} \ \text{John} \ [\text{FinP} \ \text{read} \ [\text{VP} \ \text{a book}]])] \]

merge W and move TopP ▶

\[ [\text{WP} \ [\text{TopP} \ \text{John} \ [\text{FinP} \ \text{read} \ \text{a book}] \ [\text{FocP} \ \text{a book}]]) \]

merge usually and move TopP ▶

\[ [\text{AdvP} \ [\text{TopP} \ \text{John} \ [\text{FinP} \ \text{read} \ \text{a book}] \ \text{usually} \ [\text{WP} \ [\text{FocP} \ \text{a book}]])] \]
3.5 Second approximation

(144) Jens leste vanligvis en bok.
     J read usually a book

It is easy to see that addition of more adverbs would only lead to iteration
of this last step, so V2 is derived for these cases. If the subject bears focus, we
now expect the ungrammatical (145a), as shown in derivation 3.5.

(145) a. *Derfor gjenkjente meg vanligvis en student.
     therefore recognized me usually a student
b.  Derfor gjenkjente vanligvis en student meg.
     therefore recognized usually a student me

Derivation 3.5

\[
\begin{align*}
&[\text{VP a student recognized me}] & \text{MERGE Fin and MOVE V} \\
&[\text{FinP recognized [VP a student me]}] & \text{MERGE Top and therefore} \\
&[\text{TopP therefore [FinP recognized [VP a student me]]}] & \text{MERGE Foc and MOVE a student} \\
&[\text{FocP a student [TopP therefore [FinP recognized [VP me]]]}] & \text{MERGE W and MOVE TopP} \\
&[\text{WP [TopP therefore [FinP recognized [VP me]]] [FocP a student]}] & \text{MERGE usually and MOVE TopP} \\
&[\text{AdvP [TopP therefore [FinP recognized [VP me]]] usually [WP [FocP a student]]}] & \text{MERGE W and MOVE TopP} \\
\end{align*}
\]

Recall from the discussion in section 2 that such orders are actually attested
in Swedish. Thus we suggest that this is how they are derived. In order to
rule them out in Norwegian we will resort to the strategy suggested in section
3, i.e. that the subject pied-pipes the VP to spec-Foc. This makes the subject
and the object behave as a constituent and prevents the subject from inverting
with the object. This is illustrated in derivation 3.6.

In Danish subjects must precede all adverbs. Objects follow them unless
they are weak pronouns, in which case they must also precede them. I would
like to suggest that in this language, spec-Foc has been 'grammaticalized' as a
case position for objects. Weak pronouns, being marked for case, do not have
to move there. This means that there are but two positions the subject can
choose between: it can move to spec-Top, or it can remain in-situ. I the first
case, it will end up in the V2-initial position, as what happens to therefore in
Derivation 3.6

\[\text{[VP a student recognized me]}\]

MERGE Fin and MOVE V ▶

\[\text{[FinP recognized [VP a student me]]}\]

MERGE Top and therefore ▶

\[\text{[TopP therefore [FinP recognized [VP a student me]]]}\]

MERGE Foc and MOVE VP ▶

\[\text{[FocP [VP a student me] [TopP therefore [FinP recognized]]]}\]

MERGE W and MOVE TopP ▶

\[\text{[WP [TopP therefore [FinP recognized]] [FocP [VP a student me]]]}\]

MERGE usually and MOVE TopP ▶

\[\text{[AdvP [TopP therefore [FinP recognized]] usually [WP [FocP [VP a student me]]]]}\]

derivation 3.6 In the latter, it will remain immediately right-adjacent to the verb, much as the weak object pronoun in derivation 3.3. Thus we have three levels of freedom with regard to subjects and spec-Foc. In Swedish, the subject can move there alone; in Norwegian, it must pied-pipe the VP, and in Danish, it cannot move there at all.

\textit{bare}

Let us now turn to the problematic cases with V2-violating focus particles. In general, we expect these to appear in the Adv* area of (142). I suggest that they differ from other adverbs in that, instead of attracting TopP, they attract their focus associate, and come with a W-projection into which bare itself and TopP moves, i.e. we essentially adopt the treatment in Kayne (1998). Suppose that we add bare to the end result of derivation 3.6. Then, if en student is the associate, we get derivation 3.7 corresponding to the grammatical sentence in (146).

(146)   Derfor  gjenkjente bare en student meg.
         therefore recognized just one student me

Adding usually, we get the continuation in derivation 3.8 corresponding, again, to the grammatical sentence (147).

(147)   Derfor  gjenkjente vanligvis bare en student meg.
         therefore recognized usually only one student me
3.5 Second approximation

Derivation 3.7

\[
\text{[VP one student recognized me]} \quad \text{MERGE Fin and move V ▶}
\]

\[
\text{[FinP recognized [VP one student me]]} \quad \text{MERGE Top and therefore ▶}
\]

\[
\text{[TopP therefore [FinP recognized [VP one student me]]]} \quad \text{MERGE Foc and move VP ▶}
\]

\[
\text{[FocP [VP one student me] [TopP therefore [FinP recognized]]]} \quad \text{MERGE W and move TopP ▶}
\]

\[
\text{[WP [TopP therefore [FinP recognized]] [FocP [VP one student me]]]} \quad \text{MERGE just and move FocP ▶}
\]

\[
\text{[bareP [FocP [VP one student me]] just [WP [TopP therefore [FinP recognized]]]]} \quad \text{MERGE W and move just and TopP ▶}
\]

\[
\text{[WP [TopP therefore [FinP recognized]] just [bareP [FocP [VP one student me]] [WP]]]} \quad \text{MERGE W and move just and TopP ▶}
\]

Derivation 3.8

\[
\text{MERGE usually and move TopP ▶}
\]

\[
\text{[AdvP [TopP therefore [FinP recognized]] usually [WP only [bareP [FocP [VP one student me]]]]]}
\]

Consider now derivation 3.9 of (128a) above, repeated here, in which the verb is the associate. In this case, FinP moves to spec-bare.

(148) Jens vanligvis bare svarer ikke.

J usually just answers not

The essential difference between these examples and ‘ordinary’ V2 sentences is thus that the verb has been pulled out of TopP. Therefore, when TopP moves around higher adverbs, the verb is left behind. Of course, the last step of derivation 3.9 can be skipped, yielding the equally grammatical sentence Jens bare svarer ikke (‘J just answers not’).

Since weak pronouns do not move, they will be left inside the VP. This is what causes them to stay adjacent to the verb. The partial derivation 3.10 for (149) (=131a), illustrates this.
Derivation 3.9

\[
\begin{align*}
&[\text{VP John answers}] & \text{MERGE Fin and MOVE V} \\
&[\text{FinP answers} [\text{VP John}]] & \text{MERGE Top and MOVE John} \\
&[\text{TopP John} [\text{FinP answers} [\text{VP }]]] & \text{MERGE not and MOVE TopP} \\
&[\text{AdvP} [\text{TopP John} [\text{FinP answers}]] \text{not}] & \text{MERGE just and MOVE FinP} \\
&[\text{bareP} [\text{FinP answers}] \text{just} [\text{AdvP} [\text{TopP John} \text{not}]]] & \text{MERGE W and MOVE just and TopP} \\
&[\text{WP} [\text{TopP John}] \text{just} [\text{bareP} [\text{FinP answers}] [\text{AdvP not}]]] & \text{MERGE usually and MOVE TopP} \\
&[\text{AdvP} [\text{TopP John}] \text{usually} [\text{WP just} [\text{bareP} [\text{FinP answers}] [\text{AdvP not}]]]]
\end{align*}
\]

Derivation 3.10

\[
\begin{align*}
&[\text{AdvP} [\text{TopP therefore} [\text{FinP answered} [\text{VP he her}]]] \text{not}] & \text{MERGE just and MOVE FinP} \\
&[\text{bareP} [\text{FinP answered} [\text{VP he her}]] \text{just} [\text{AdvP} [\text{TopP therefore} \text{not}]]] & \text{MERGE W and MOVE just and TopP} \\
&[\text{WP} [\text{TopP therefore} \text{just} [\text{bareP} [\text{FinP answered} [\text{VP he her}]] [\text{AdvP not}]]]] & \text{MERGE usually and MOVE TopP} \\
&[\text{AdvP} [\text{TopP therefore} \text{usually} [\text{WP just} [\text{bareP} [\text{FinP answered} [\text{VP he her}]] [\text{AdvP not}]]]]]
\end{align*}
\]

(149) Derfor vanligvis bare svarte ’n ’a ikke.
therefore usually just answered he her not

Nothing special needs to be said about the low subject-verb inversions noted in section 4. There are two cases to consider. If the subject is a weak pronoun, it remains in the VP, and moves with the verb, as in the previous derivation. If it is a full noun phrase, as in (150) (=140a) it can move to spec-Foc, giving rise to the derivation 3.11.
3.5 Second approximation

(150) Meg vanligvis bare svarte ikke Jens.
me usually just answered not J

Derivation 3.11

\[ \text{[VP John answered me]} \]
MERGE Fin and move V ▶

\[ \text{[FinP answered [VP John me]}] \]
MERGE Top and move me ▶

\[ \text{[TopP me [FinP answered [VP John]]]} \]
MERGE Foc and move VP ▶

\[ \text{[FocP [VP John] [TopP me [FinP answered]]]} \]
MERGE W and move TopP ▶

\[ \text{[WP [TopP me [FinP answered]] [FocP John]]} \]
MERGE not and move TopP ▶

\[ \text{[AdvP [TopP me [FinP answered]] not [WP [FocP John]]]} \]
MERGE just and move FinP ▶

\[ \text{[bareP [FinP answered] just [AdvP [TopP me not [WP [FocP John]]]]]} \]
MERGE W and move just and TopP ▶

\[ \text{[WP [TopP me] just [bareP [FinP answered] [AdvP not [WP [FocP John]]]]]} \]
MERGE usually and move TopP ▶

\[ \text{[AdvP me usually [WP just [bareP [FinP answered] [AdvP not [WP [FocP John]]]]]]]} \]

As the reader may have noticed, nothing has been said, so far, about examples like (131b), repeated in (151), where Vf does appear in the second position even though there is an fpt modifying it.

(151) Derfor svarte ’n ’a vanligvis bare ikke.
therefore answered he her usually just not

In order to handle these cases, we propose that FinP, when it moves to spec-
bare, can pied-pipe TopP. This has the effect of making bare behave as other
adverbs with respect to V2. This is illustrated in the partial derivation 3.12

Auxiliaries and the derivation of HG

There is a large literature on the syntactic treatment of auxiliaries (cf. Cinque
2000, Koopman and Szabolcsi 2000, Julien 2000 for recent discussion). One
Derivation 3.12

\[
[\text{AdvP } \text{therefore } [\text{FinP } \text{answered } [\text{VP he her}]] \text{ not } ]
\]

\[
\text{MERGE just and MOVE TopP ▶}
\]

\[
[\text{bareP } \text{therefore } [\text{FinP } \text{answered } [\text{VP he her}]] \text{ just } [\text{AdvP not }]]
\]

\[
\text{MERGE W and MOVE just and TopP ▶}
\]

\[
[\text{WP } \text{therefore } [\text{FinP } \text{answered } [\text{VP he her}]] \text{ just } [\text{bareP } [\text{AdvP not }]]]
\]

\[
\text{MERGE usually and MOVE TopP ▶}
\]

\[
[\text{AdvP } \text{therefore } [\text{FinP } \text{answered } [\text{VP he her}]] \text{ usually } [\text{WP just [bareP [AdvP not]]}]]
\]

controversy is whether or not to treat e.g. participial constructions as biclausal (Kayne 1993). We remain agnostic about this question here, simply analyzing auxiliaries by stacking them onto the VP. We do treat them as 'raising verbs' in the sense that they attract the subject from the inner VP. This is in order to exclude sentences like (49) where the subject follows an auxiliary.

\[\text{(152)}\]

\[
\text{* Derfor kan ikke ha 'n sett Jens.}
\]

\[
\text{therefore can not have he seen J}
\]

We assume that participial VPs move to spec-Foc unless the participial verb is a topic. Apart from this, auxiliaries do not pose any special problems for our account. We need to discuss them, however, in order to show that the account really derives HG which we repeat here for convenience.

\[\text{(153)}\]

Holmberg’s Generalization (HG)

Argument shift cannot cross any phonetically realized material from the VP, i.e. the verb, a verbal particle, a dative preposition, or other arguments of the verb, although it can cross traces of these, as well as sentential adverbs.

We have said that weak pronouns never move. What is crucial is that they never shift. Otherwise, they are free to move, as it were. In particular, they can move to spec-Top, which ultimately places them in the initial position of the clause. They cannot move to spec-Foc for the simple reason that they are weak, and, in Danish, because they bear morphological case. Consider now the contrast between (154) and (155), a typical example of HG.

\[\text{(154)}\]

\[\text{a. Jeg så 'n ikke.}
\]

\[\text{I saw him not}
\]

\[\text{b. * I så ikke 'n.}
\]

\[\text{I saw not him}
\]
We have already seen how it comes about that the weak pronoun must precede
the negation in (154a). We need to demonstrate that it cannot do so if there
is an auxiliary. The first steps in the derivation of (155b) are as follows.

**Derivation 3.13**

\[
[\text{VP I have [PtcP seen him]]} \\
\text{MERGE Fin and MOVE V ▶}
\]

\[
[\text{FinP have [VP I [PtcP seen him]]}]
\]

At this point, one of two things can happen: either the subject moves to
spec-Top, or the object does. As we shall see below, the participial verb can
also do this. If the subject moves, we get the following continuation, deriving
(155b).

**Derivation 3.14**

\[
\text{MERGE Top and MOVE John}
\]

\[
[\text{TopP I [FinP have [VP [PtcP seen him]]]}] \\
\text{MERGE Foc and MOVE PtcP ▶}
\]

\[
[\text{FocP [PtcP seen him] [TopP I [FinP have [VP ]]}}]\]

\[
\text{MERGE W and MOVE TopP ▶}
\]

\[
[\text{WP [TopP I [FinP have ] [FocP [PtcP seen him]]]}] \\
\text{MERGE not and MOVE TopP ▶}
\]

\[
[\text{AdvP [TopP I [FinP have ] not [WP [FocP [PtcP seen him]]]]}]
\]

In the alternative case, the object moves to spec-Top, yielding the following
continuation of derivation 3.13 corresponding to the grammatical sentence in
(156).

(156)  
\[
\text{Han har jeg ikke sett.}
\]
\[
\text{him have I not seen}
\]

If the participial verb is a topic, it moves to spec-Top on its own. This
implies that heads can move to specifier positions, contra standard assumptions.
It is possible that this problem would disappear if we adopt a biclausal structure
for participial constructions, (Kayne 1993). Another alternative would be to
say that the participle adjoins to Top, and that this serves the same purpose as moving it to spec-Top. We choose to live with this problem for the purposes of this section. Consider the contrast below.

(157) a. Sett har jeg ’n ikke.
    seen have I him not
  
  b. *Sett har jeg ikke ’n.
    seen have I not him

When the participle is fronted, the pronoun must precede the negation. This fact is problematic for the traditional account which treats weak pronoun distribution as pronoun shift and V2 as V-to-C with subsequent topicalization. In order to rule out (155a), such an account must block pronoun shift over the verb, but allow it over its trace. In order to account for the grammaticality of (157a), the same account must allow movement over the verb. In fact, in view of (157b) such movement must be forced just in case the verb subsequently topicalizes or undergoes V-to-C movement.

Suppose that the proper formulation of HG is in entirely phonological terms. The fact that pronoun shift is allowed around traces might follow rather elegantly from such a formulation, since traces do not have phonological content. But the fact that they can cross adverbs seems rather mysterious; the more so because they must cross adverbs if they can. It seems unlikely that there should be any phonological property distinguishing adverbs from all other material. To be on the safe side, we will show that there isn’t. The Norwegian word *fortsatt* ambiguously represents the adverb ‘still’ and the participial verb ‘continued’. In the adverb interpretation it forces pronoun shift and in the participial interpretation it blocks it.

(158) a. Han har fortsatt det.
    he has continued it
b. Han har det fortsatt.
   he has it still

Rejecting a phonological formulation, there are two scenarios to consider according to whether or not bare heads are allowed to topicalize. If they are, one would need to assume that there is some domain extension mechanism (cf. Chomsky’s 1995 notion of ‘equidistance’) which would be triggered by such topicalization. If head movement to spec-CP is not endorsed, one would need to assume that pronoun shift cannot cross the participle for syntactic reasons, but that this can be violated if the (remnant) VP subsequently topicalizes. On our account, nothing special needs to be said. We assume that heads can move to spec-Top with the caveat noted above. The derivation of (157a) runs as follows.

Derivation 3.16

\[
\begin{array}{c}
[\text{FinP have [VP I [PtcP seen him]]}] \\
\text{MERGE Top and MOVE Ptc} \uparrow \\
[\text{TopP seen [FinP have [VP I [PtcP him]]]}] \\
\text{MERGE not and MOVE TopP} \uparrow \\
[\text{AdvP [TopP seen [FinP have [VP I [PtcP him]]]] not}]
\end{array}
\]

This concludes our discussion of Mainland Scandinavian root clauses.

3.5.2 More problems

One obvious problem with the second approximation is that it leads us to expect sentences like (159) to be undervivable, contrary to fact.

(159) Sannsynligvis har Jens gått hjem.
   probably has J gone home

The adverb *sannsynligvis* ‘probably’, being generated in the “adv*” area of (112), would have to be lowered into spec-TopP in order to end up in the first position. Assuming that lowering is impossible for principled reasons, this must be wrong.

A second problem, pointed out to me by Richard Kayne (p.c.) is that the account of topicalized bare participles in terms of head-movement to spec-TopP fails to generalize to cases like the following, where the fronted material is syntactically complex, but nevertheless stranding the pronoun.

(160) a. [lagt på bordet] har jeg dem ikke.
    put on the-table have I them not
Given that the subject-initial counterpart of (160a) (i.e. (160b)) has the pronoun sandwiched between the participle and the PP, it seems that we have to assume that the weak pronoun is moved out of the VP prior to VP-topicalization. Thus, (160) suggests a derivation like derivation 3.17 which contradicts our assumption that weak pronouns don’t shift.

**Derivation 3.17**

\[
\text{[not [put them on the table]]} \quad \text{MOVE them} \uparrow
\]

\[
\text{[them, [not [put ti on the table]]]} \quad \text{MERGE I and have} \uparrow
\]

\[
\text{[I have [them [not [put ti on the table]]]]} \quad \text{MOVE have and VP} \uparrow
\]

\[
\text{[[put ti on the table]j havek [ I tk [them, [not tj]]]]}
\]

However, there are reasons to think that the position of the pronoun in (160) is due to an operation different from “ordinary” pronoun shift (henceforth PS; I will refer to the pronoun shift of examples like (160) as “stranded PS”, in short SPS). It is well-known that PS does not license parasitic gaps, thus (161a) is ungrammatical.

(161)  

\begin{align*}
\text{a.} & \quad * \text{Jeg kysset henne aldri uten å danse med } \text{pg først.} \\
& \quad \text{I kissed her never without to dance with } \text{pg first}
\end{align*}

(162)  

\begin{align*}
\text{b.} & \quad * \text{Kysset har jeg henne aldri uten å danse med } \text{henne først.} \\
& \quad \text{kissed have I her never without to dance with her first}
\end{align*}

At first sight, SPS behaves the same, i.e. (162) is also ungrammatical.

However, when the adverbial PP is moved along with the topocalized participle, the parasitic gap becomes possible, if fact, even obligatory. (163b) is sharply ungrammatical.

(163)  

\begin{align*}
\text{a.} & \quad [\text{kysset uten å danse med } \text{pg først}] \text{ har jeg henne aldri.} \\
& \quad [\text{kissed without to dance with } \text{pg first} \text{ have I her never}
\end{align*}
For the standard theory of PS, this would have to be taken to indicate that the dependency between the pronoun and the VP-internal trace in SPS (163a) must be of a different kind than the dependency between the pronoun and the trace in “ordinary” cases of PS, such as (161b). SPS exhibits $\lambda$-properties, while PS doesn’t. In our setup, the difference would lie in the presence (163a) versus absence (161b) of a dependency. That is, I am suggesting that there is movement in the former case but not in the latter.

A third problem is that we have stipulated that e.g. the subject must pied-pipe the VP (or vP) when it moves to spec-TopP. This is in order to rule out examples where the object is carried along with Vf to the initial position, crossing the subject, i.e. orders like (145), grammatical in Swedish. Suppose, putting aside Swedish for the moment, that only VPs can move to spec-FocP. Then these stipulations would follow from that. There is evidence that it is at least possible to move VPs to spec-Foc, with subsequent raising of the remnant EVP, thus yielding “VP-extraposition” structures.

(164) a. ...at han hver dag møtte en ny pike
    ...

In Nilsen (2000), these are interpreted as fronting of the adverbial $\text{hver dag}$ to a high, left peripheral position. The grammaticality of (165), where a sentence adverb intervenes between the matrix subject and $\text{hver dag}$ might be taken to call that analysis into question, however. Instead, I will interpret it as leftward movement of the VP $\text{met a new girl}$ prior to leftward movement of the remnant EVP $\text{every day} v P$, as illustrated in the derivation 3.18 below.

(165) ...at han tydenigvis hver dag møtte en ny pike
    ...

that he evidently every day met a new girl

3.6 German

German does not have V2-violations with $fpt$ (166a). Thus, it might appear that our argument in section 2, that Mainland Scandinavian V2 is not derived by head movement, does not carry over to German. Of course, we would not want to say that German V2 is derived in a fundamentally different way

4 This does not explain the properties of sentences like (163). In particular, it does not explain the obligatory nature of the parasitic gap. Although I find this question intriguing, I will leave it aside for now. What is important here is just that SPS behaves differently from PS in important respects, so we should not expect both to be reducible to the same operation.

5 In case one needs further projections over VP, one could generalize this statement to “extended V-projections”.

German
from Mainland Scandinavian V2. After all, this is one property that the two languages obviously have in common. We would like to know, however, what underlies the contrast between the German sentence (166a) and the Norwegian one (167), and how the analysis of V2 defended here would fare with German facts.

(166)  a. *Gerhard nur weiß es nicht.
      G only knows it not

      b. Gerhard weiß es nur nicht.
       G knows it only not.
       “Gerhard just doesn’t know it.”

(167)  Jens bare vet det ikke.
       J just knows it not

However, as discussed in Meinunger (to app., 2001) and Fanselow (2002), other expressions, such as the the operator *mehr als* ‘more than’ must precede the finite verb (when this is the modifier). Consider the examples in (168).

(168)  a. daß Hans seinen Profit letztes Jahr mehr als verdreifachte
      that H his profit last year more than tripled

      b. *Hans verdreifachte seinen Profit letztes Jahr mehr als.
       H tripled his profit last year more than

      c. %Hans mehr als verdreifachte seinen Profit letztes Jahr.
       H more than tripled his profit last year.

      d. %Seinen Profit mehr als verdreifachte Hans letztes Jahr.
       his profit more than tripled H last year.

Meinunger (to app., 2001) gives examples like (168c) as ungramatical. Fanselow (2002) reports that in a survey, 6 out of 20 speakers actually accept them. For Dutch, I found that 4 out of 8 speakers accept them. The differences were very sharp: the ones who accept them, find them perfectly grammatical, while those who don’t find them sharply ungrammatical.
3.6 German

(169) a. % Hij meer dan verdubbelde zijn score-totaal hemore than doubled his score-total vorig jaar.

b. *Hij verdubbelde zijn score-totaal meer dan.
   he doubled his score-total more than
c. % De winst meer dan verdubbelde.
   The gain more than doubled
d. *De winst verdubbelde meer dan.
   The gain doubled more than

In this case, the v2-violation is actually obligatory for the people who accept it. The speakers who don’t accept them have to use a periphrastic construction to express the same (or a similar) meaning. I take this to show that some varieties of Dutch and German do allow for the relevant pattern. More research is required to determine the precise generalizations concerning the limitations on this phenomenon.

3.6.1 Hallman’s analysis

In a recent paper, Peter [Hallman] (2001) proposes to tie together the verb-finality of German embedded clauses and the root-embedded asymmetry in the same language (i.e. root clauses are V2, embedded clauses are typically verb-final) in the following way. He follows, more or less the standard approach to root V2, i.e. the verb moves to some high F₀, T₀ in his case, and then some XP moves to spec-F₀\(^7\).

Hallman’s innovation is to treat embedded (V-final) clauses as, in a sense, V2 as well. His derivation of a V-final structure is given in Figure 3.3 where

---

\(^7\)Hallman has AgrP, hosting the subject of the clause below TP.
Vf moves to T⁰ as in Figure 3.2 and then the entire AgrP is moved to spec-T. In this sense, Vf is actually in second position, even in V-final structures.

![Diagram](image)

Figure 3.3: Hallman’s V-final

### 3.6.2 Müller’s V2 as vP first

Müller (2002) proposes an analysis of German V2 which, as we shall see, shares crucial assumptions with the analysis developed in section 3.5. However, the execution is quite different, and some of the facts discussed in the present work, notably HG, does not fall under Müller’s analysis. I will use his analysis as a spring board to extend my analysis to German.

Müller casts the analysis in terms of phase theory (Chomsky, 1999, 2001). He adopts the following definitions to that end:

1. **Strict Cycle condition SCC**
   Within the current XP α, a syntactic operation may not target a position that is included within another XP β that is dominated by α.

2. **Phase Impenetrability Condition (PIC)**
   Material that is dominated by a phase XP is not accessible to operations at ZP (the next phase) unless it is part of the edge domain of X.

3. **Edge Domain**
   A category is in the edge domain of a head X if it is at an edge of the minimal residue of X.

*Phases are utilized in derivations of island constraints. See Stark (2001) for a recent, comprehensive account of island constraints without resorting to phases.*
a. **Minimal Residue**
   The minimal residue of X includes X, and the head minimally c-commanded by X (the head residue, HR), and the specifiers of X (the spec-residue, SR).

b. **Edge**
   A category is at an edge of the minimal residue of X iff it is the highest phonologically overt item in HR or SR.

Müller then assumes that German clause structure conforms to (174); he treats “scrambling” as movement of some XP to an outer specifier of v; he follows Diesing (1992) and others in assuming optional subject raising to spec-T; he assumes that weak pronouns are obligatorily fronted within TP; that there is wh-movement to the specifier of “filled C”; and, finally, that main verbs always remain in situ, since head movement is ruled out in principle.


V2 results from attraction of v by C. Since head movement is not possible, v must move as a phrase, thus (potentially) pied piping other material. Müller proposes the following constraint on vP movement to C:

(175) **Edge Domain Pied Piping Constraint (EPC)**
   A moved vP contains only the edge domain of its head.

This forces massive evacuation of vP prior to movement of vP to CP. He notes that such evacuation cannot be triggered by features, and therefore suggests that Last Resort (LR)\(^{10}\) should be weakened to a “soft” (i.e. violable) constraint. Thus, his EPC must be ranked higher than Last Resort, implying an Optimality Theoretic (OT) evaluation procedure.\(^{11}\) Given all this, Müller’s derivation for (176) is given in derivation 3.19.

(176) Die Maria hat den Fritz geküßt
    The-NOM M has the-ACC F kissed

Müller assumes that adverbs can be merged as specifiers of vP. If an adverb is merged before the subject, the subject will be in the edge domain of v, so the EPC forces adverb to move out before vP fronting takes place. This would lead to a subject-initial sentence again. If the adverb is higher than the subject, the latter is forced out of vP, again because of the EPC, leading to an adverb-initial sentence. One must then assume that vP evacuation is order preserving: If not, one would be able to derive sentences where the VP precedes the subject.

---

\(^9\) Note that this structure seems to imply that Müller has head directionality.

\(^{10}\) LR states that every movement must result in checking of a feature.

\(^{11}\) He also suggests that one could reformulate LR to the effect that movement must either be driven by feature checking or by the need to satisfy a constraint like EPC.
Derivation 3.19

\[
[\vP \text{Die Maria}] \quad [\vP \text{den Fritz} \text{ geküßt]} \text{ hat}] \\
\text{MERGE T and MOVE VP} \uparrow \\
[\TP \text{[Den Fritz} \text{ geküßt]}_i] \quad [\TP \text{T} \quad [\vP \text{[die Maria]} \quad [\vP \text{t]} \text{ hat]}]] \\
\text{MERGE C and MOVE vP} \uparrow \\
[\CP \quad [\vP \text{[die Maria]} \quad [\vP \text{t]} \text{ hat]}]] \quad [\TP \text{[den Fritz} \text{ geküßt]}_i] \quad [\TP \text{T} \quad [\vP \text{t]}]]
\]

Müller suggests that this is a general property of movement operations that are not feature driven. I give his derivation for (177) in derivation 3.20.

(177) Gestern hat die Maria den Fritz geküßt.
Yesterday has-the-NOM M the-ACC F kissed

Derivation 3.20

\[
[\vP \text{gestern}] \quad [\vP \text{Die Maria}] \quad [\vP \text{den Fritz} \text{ geküßt]} \text{ hat}] \\
\text{MERGE T and MOVE VP and die Maria} \uparrow \\
[\TP \text{[die Maria]_i} \quad [\vP \text{den Fritz} \text{ geküßt]}_i] \quad [\TP \text{T} \quad [\vP \text{gestern} \quad [\vP \text{t]} \quad [\vP \text{t} \text{ hat]}]]] \\
\text{MERGE C and MOVE vP} \uparrow \\
[\CP \quad [\vP \text{gestern} \quad [\vP \text{t]} \quad [\vP \text{t} \text{ hat]}]]] \quad [\TP \text{[die Maria]_i} \quad [\vP \text{[den Fritz} \text{ geküßt]}_i] \quad [\TP \text{T} \quad [\vP \text{t]}]]
\]

Object-initial sentences are analyzed by scrambling the object to spec-\(v\P\) after merging the subject. He analyzes such scrambling as an instance of feature-driven movement, and he denotes the feature (or bundle of features) responsible for scrambling as \([\Sigma]\). Thus, (178) is derived in derivation 3.21.

(178) Den Fritz hat die Maria geküßt.
the-ACC F has-the-NOM M kissed

This kind of derivation generalizes to other material which can be moved to spec-\(v\). In other words, VP-topicalizations and long-distance topicalizations will be derived in the same way, by first moving the constituent in question to the highest specifier of \(v\), then evacuating \(v\P\) in order to satisfy the EPC and finally moving \(v\P\) to spec-CP.

\footnote{One would still like to know why. Note also that, given that the subject and the VP move separately, this would have to be stated as a constraint, not on a single application of \textsc{move}, but on a set of applications, all of which are not triggered by a feature. The fact that the two movements must cooperate in this way seems to me to suggest that we are rather dealing with one movement. I return to this point below.}
3.6 German

Derivation 3.21

\[
\begin{align*}
\text{[vP [die Maria] \[vP [\text{den Fritz}] \Sigma \text{ geküßt} \hat{t_{i+1}}]]} & \quad \text{move den Fritz} \\
\text{[vP [\text{den Fritz}] \Sigma \[vP [\text{die Maria}] \[vP \hat{t_{i+1}}]]] & \quad \text{merge } T, \text{ and move VP and die Maria} \\
\text{[TP \[\text{die Maria}\] \[TP \hat{t_{i+1}}]]} & \quad \text{merge } C \text{ and move vP} \\
\text{[CP \[\text{den Fritz}\] \[vP \hat{t_{i+1}}]]} & \quad \text{merge } C \text{ and move vP}
\end{align*}
\]

Müller’s account is similar to the one developed in section 3.5 (Nilsen to app.b) in the sense that, whereas Müller has vP first, I have TopP first. In fact, movement to spec TopP and movement to an outer specifier of vP (triggered by \(\Sigma\)) are also similar, modulo labelling and Müller’s EPC-driven vP-evacuation is analogous to our movement to spec-Foc. But there are also differences. An obvious one is that it is unclear how, on Müller’s account, we could account for Holmberg’s Generalization (HG) in the way that we did in section 3.5. Since the pronouns follow the finite verb, they would have to reside in VP on Müller’s account. But VP could only participate in Müllerian vP-fronting in the relevant cases at the cost of incurring an EPC-violation. Perhaps one could treat the EPC as a soft constraint as well, which is what Müller suggests for Last Resort. But assuming an OT evaluation mechanism on top of the sort of syntax that we are considering seems to me slightly off the parsimonious track. Another problem, pointed out by Müller, is that the analysis relates topicalization to scrambling. In other words, in this setup, an object noun phrase can only end up preceding the finite verb by scrambling past the subject to the left edge of vP. This creates problems for all the other Germanic V2 languages which do not allow such scrambling in the first place, but do allow objects to occupy the first position. Müller’s account also has some advantages over mine. For example, it does not have a problem with generating V2-initial adverbs, which, as we saw, pose problems for my account. Secondly, and related to the previous point, Müller’s account correctly leads on to expect there to be an asymmetry between subjects and adverbs in first position on the one hand, and objects and other arguments on the other. The latter kind of expression can only occupy the first position in certain discourse functions (see below), whereas subjects and adverbs do not require special discourse function to occupy the first position.

\footnote{Dutch, Norwegian, Swedish and Icelandic allow “argument-shift” of weak pronouns and full noun phrases, as long as the relative ordering of the arguments is unaffected. Danish only allows shifting of weak pronouns.}
3.7 Third approximation: V2 without positions

In order to incorporate the advantages of Müller’s account, I will assume that there is a head Σ which can merge above or below the subject. If it is merged below the subject, as in the leftmost tree in figure (3.4), the subject will count as a “specifier” of Σ. If it is merged above, any adverb merged to the result of that will count as the “specifier” of Σ. This is illustrated in the rightmost tree in figure (3.4). I will furthermore assume that Σ has an EPP-feature: it must have a phonetically visible specifier.

Finally, Σ attracts the verb. If it has a marked feature, it attracts some phrase functioning as a contrastive topic. Before we go on, we must address how the verb moves to Σ.

Head Movement: an aside

Müller’s analysis is motivated by the desire to rule out head movement in principle. If this is to be possible, phenomena like V2 must be analyzed without recourse to HM. Needless to say, I fully agree with Müller that V2 can and should be so analyzed. However, I would like to point out some aspects of Müller’s approach that I take to be problematic. First, the machinery that he employs to rid the system of HM is rather elaborate (Phases, massive remnant movement, optimality theory, etc.). Thus it is not clear that eliminating HM in this way represents a simplification of the system. This becomes even less clear if we look at how Müller derives the unavailability of HM. Suppose that we treat the unavailability of HM as an empirical generalization in need of explanation, and then look at how it is explained in the setup under consideration.

Generalization 3 (Müller (2002)) Heads stay.

Müller’s explanation is that adjunction of a head to another one would violate the Extension Condition stated roughly in (179).

\[ \text{Extension Condition} \]

\[ \text{Merger extends the tree at the root.} \]
3.7 Third approximation: V2 without positions

This would rule out head movement only if it follows from independent considerations that moved heads cannot be merged to the root. In other words, the tree in figure 3.5 must be ruled out if \( \alpha \) is a moved head (not if it isn’t moved, of course, because then heads could never be merged to anything). We now need to explain why it matters that \( \alpha \) is moved and why it matters that it is a head. To this end, we adopt some contextual definition of the notion “head”, crucially involving that all heads project. In other words any syntactic object that does not project further is a maximal projection, hence not a head. We then assume some version of the Chain Uniformity Condition, such as (180):

\[
(180) \quad \text{Chain Uniformity Condition (CUH)}
\]

Chains are uniform with respect to the feature \([\pm \text{max}]\) (and, perhaps other features)

If the label of the root node is not allowed to project from the moved head, this setup rules out the configuration in question, because the trace of \( \alpha \) is a head (does project further), while \( \alpha \) is a maximal projection (does not project). Hence the configuration violates the CUH. As noted in Fanselow (2002), the CUH would be satisfied if \( \alpha \) projects, since, in that case, both the trace and its antecedent are heads. In order to rule out this option, Müller could make reference to his Unambiguous Domination constraint (UD):

\[
(181) \quad \text{Unambiguous Domination (UD)}
\]

An \( \alpha \)-trace cannot be \( \alpha \)-dominated.

Müller motivates this constraint by independent considerations. This rules out the version of figure 3.5 where the root label is projected from \( \alpha \), because the root node dominates the trace of \( \alpha \).

In sum, HM is ruled out, because the Extension Condition rules out adjunction of a head to a head; the CUH rules out attachment of a non-projecting, moved head to the root node, given the \([\pm \text{max}]\) distinction; and the UD rules out attachment of a projecting, moved head to the root node.

It seems to me that this is just a roundabout way of stating generalization. It seems to say that heads can’t move because they have a feature \([-\text{MAX}]\) that prevents them from moving. Furthermore, this feature doesn’t seem to do anything else than just that.

\[\text{(14)}\quad \text{It is needed to explain e.g. why remnant VP s can be topicalized but not scrambled in German.}\]
Suppose that we don’t allow ourselves all this machinery. In other words, we do away with the distinction between heads and phrases. Then the CUH becomes vacuous, so it can be dismissed, too. Thus, we are left with the extension condition. Then we would be closer to the system discussed in Koeneman (2000) and Fanselow (2002). However, whereas, e.g. Fanselow (2002) uses the CUH to allow head movement only if the head projects, we do not have this option, since we do not have the CUH (or any distinction to state it on). Therefore, we would be led to allow heads to move to specifiers.

Holmberg (2000) argues on the basis of empirical facts that head movement to specifiers should be allowed, just in case it is movement of the phonological features of the head alone. In other words, if it is driven by purely phonological considerations. Bobaljik and Brown (1997) point out that, even with the elaborate machinery employed in the scenario above to rule out head movement, one could think of ways to allow it. Their idea is that, in a theory of move as “copy+merge”, one could merge two heads before they are merged to the main tree. In other words, if the derivation has reached a stage such as (182a), where $x$ is a head, and the next thing to be merged $y$ is also a head, one can copy $x$ and merge it to $y$, yielding the intermediate stage (182b) with two distinct syntactic objects. Then these are merged in (182c).

(182) a. \[xp \ldots x\ldots]\n
b. \[[y \; x \; y] \; [xp \ldots x\ldots]\n
c. \[[yp[y \; x \; y]] \; [xp \ldots x\ldots]]\n
One might object that this would allow “sideways” movement, i.e. movement to a non-c-commanding position, but Bobaljik and Brown (1997) argue that there are obvious ways around this.

I will not dwell on the issue here. I will assume that movement of V to $\Sigma$ is head-movement in the traditional sense that the verb adjoins to $\Sigma$. I take it to be driven by the phonetic emptiness of $\Sigma$.

3.7.1 the analysis

In a sense, Müller’s massive vP evacuation is forced by the fact that he assumes that $v$ and the left-edge XP may be separated by other material. This leads to the situation that lower specifiers of $v$ and VP do not make up a constituent. Hence, when they must leave vP, they must do so separately. But the mere fact that they must land in the same order as they started may lead one to suspect that they move as one constituent, rather than massive parallel movement. The elegance of that would be that it would derive the order preservation property, rather than stipulating it as an extra constraint on the output. Suppose, therefore, that our head $\Sigma$ corresponds to the standard $v$. As before, it attracts the highest verb. It must have a specifier, i.e. it has an “EPP” feature. If it also has a marked $\Sigma$ feature, it furthermore requires its specifier to be a (contrastive) topic. Suppose, furthermore that, $\Sigma$ merges above or below the subject, and
that an adverb merged immediately after Σ will satisfy its EPP. This would be the same for all the V2 languages. They differ with respect to what happens next.

**Main clauses**

For Main clauses, I assume very much the same analysis as before. Any VP-node which contains focused material must move out of the scope of Σ, to the left of its specifier. Next, Σ pied pipes it’s “specifier” to the left of that again. For ease of reference, I will refer to the smallest node containing both Σ and its specifier (and potentially more material following Σ) as ΣP. Thus, we end up with the following kind of structure. Note now that whatever material

![V2 structure](image)

follows Σ inside ΣP will end up preceding the extracted VP, as it did before movement. Furthermore, no reordering of material will take place within VP. Hence, Müller’s order preservation constraint follows.

Before I demonstrate this, some words on what can occupy spec-Σ when this head has an unmarked feature are in order. Subjects definitely can, and some though not all adverbial type elements. Thus, the examples in (183) do not require any marked intonation pattern, while those in (184) do.

(183)  
  a. Han så ikke Jens.  
        he saw not J  
  b. Kanskje han ikke så Jens.  
        maybe he not saw J  
  c. Derfor så ’n ikke Jens.  
        Therefore saw he not J

(184)  
  a. Alltid så han Jens.  
        always saw he J  
  b. Jens så han ikke.  
        J saw he not  
  c. Så Jens gjorde han ikke.  
        saw J did he not
(183a) is the clearest case of an unmarked XP. In (183b) we see the well-known fact that the adverb ‘kanske ‘maybe’ can serve as both the first constituent and the finite verb simultaneously, as it were ([Platzack 1986]). I take this to be a special case, attributable to the fact that the adverb is “verbal” and “phrasal” or “adverbial” at the same time, so it can check both the EPP feature and the V feature of Σ. Finally, discourse relation markers, like derfor ‘therefore’, likevel ‘nevertheless’ etc. can (but need not) occupy the first position. These may clearly relate to a marked, rather than an unmarked Σ, if marked Σ is to be related to topichood. I will leave these aside. Hence it really seems that the subject is the core unmarked XP. Everything else requires a marked intonation pattern. Consider now potentially problematic cases where an unstressed object pronoun occupies XP. In particular, consider (185b) and (185c) as replies to the question in (185a).

(185) a. Så du Jens?
    Saw you J
b. Nei, han så jeg ikke.
    no him saw I not
c. Nei, jeg så ‘n ikke.
    no I saw him not

(185b), construed as an answer to (185a), suggests that you did see somebody else, although you didn’t see Jens. (185c) does not give rise to such a suggestion. In other words, even the unstressed object pronouns seem to receive a contrastive interpretation when they occur in first position. Thus, I take this to suggest that the only way for a non-subject (discourse markers aside) to occupy spec-σ is by attraction of a marked value. Now, note also that the discourse value of the first (marked) constituent is no that of “new information focus”. This can be seen by the fact that an object in first position is very clumsy as an answer to an object wh-question. Suppose that, upon meeting John outside the cinema, I ask him (186a). (186b) does not seem to be an adequate answer to the question, or at the very least it requires that we have been talking about the movie “Mulholland Drive” before. In other words, it must be in our common ground. (186c) would be the most straightforward answer.

(186) a. Hvilken film har du sett?
    which movie have you seen?
b. # Mulholland Drive har jeg sett.
    M D have I seen

In Swedish, the corresponding adverb works slightly differently: It behaves as a finite verb, i.e. may (but need not) occupy the second position in traditional terms. I refer the reader to Platzack’s work for discussion.
3.7 Third approximation: V2 without positions

It seems to me that non-canonical topicalization often (if not always) leads to switching of topic to another already accessible one. Thus, if the discourse has been about topics \(x, y, z\), and \(z\) is the current one, topicalization of a constituent denoting \(y\) makes \(y\) the current topic again. Non-canonical topicalization of an \(x\) which is the current topic, like in (185b) seems to suggest that \(x\) is no longer the topic. In other words, marked \(\Sigma\) denotes “switch topic”.

The analysis for simple main clauses generalizes straightforwardly to German and Dutch. I return to the slightly more complicated question of periphrastic constructions and verb finality shortly.

Order preservation and scrambling

Let us now see how our setup derives order preservation. I give the derivation for (187) in derivation 3.22. The crucial fact is that the two objects must occur in the same order as they were merged.

(187) Jeg ga alltid Jens en kylling.
I gave always J a chicken

Derivation 3.22

\[
\text{[I gave Jens a chicken]} \quad \text{MERGE } \Sigma \text{ and MOVE } \text{gave} \text{ and } I \uparrow
\]
\[
\text{[I, [gave] + \Sigma]} \quad \text{[t, t] Jens a chicken]}
\]
\[
\text{MOVE VP } \uparrow
\]
\[
\text{[[t, t] Jens a chicken]_k [I, [gave] + \Sigma]} \quad \text{[t_k]}
\]
\[
\text{MERGE always and move } \Sigma \text{P } \uparrow
\]
\[
\text{[[I, [gave] + \Sigma] t_k] [always [t, t] Jens a chicken]_k t_1 ]}
\]

Suppose that we move the two objects separately instead of as a constituent. Clearly, this could reverse their order, if we can move the indirect object first, and then move the direct object across it. Of course, this is perfectly possible in languages like German which has argument–argument scrambling. However, Mainland Scandinavian, Icelandic and Dutch do not allow argument reordering. I suggest that the difference lies in whether the language in question allows the arguments themselves, or only VPs to “scramble” out of \(\Sigma\)P for focus reasons. If only VPs are allowed, the Extension Condition will actually rule out reordering. Consider the following partial derivation 3.23 for (188). I assume a VP-shell

\[16\text{As argued extensively in [Nilsen] (1997). Norwegian and Swedish do allow for “object shift” of full DPs, indirect, as well as direct objects, even simultaneously. However, the}\]
type analysis for double object constructions.

(188) Jeg ga Jens altid en kylling.
I gave Jens always a chicken

**Derivation 3.23**

\[
\begin{align*}
\text{MERGE } \Sigma \text{ and MOVE } \text{gave and } I \uparrow \\
\text{MOVE a chicken } \uparrow \\
\text{MERGE always and MOVE Jens } \uparrow \\
\text{MOVE } \Sigma P \uparrow \\
\end{align*}
\]

Given that we can only move VPs, we could not move a chicken around Jens without violating the extension condition. In derivation 3.23, we do have movement of a chicken around the indirect object. However, this will always be repaired automatically. Either the indirect object itself moves out of \( \Sigma P \), as in derivation 3.23, or if it doesn’t, it will be carried along with \( \Sigma P \) fronting, around the direct object again. This is illustrated in the alternative derivation 3.24 for (188), starting from the step where a chicken has already left \( \Sigma P \). The same obviously applies when the subject is not in the first position.

**Derivation 3.24**

\[
\begin{align*}
\text{MERGE always } \uparrow \\
\text{MOVE } \Sigma P \uparrow \\
\end{align*}
\]

Hence, it seems to me that this actually reduces the order preserving nature of scrambling/argument shift in the relevant languages to one rather natural difference: the “free word order” languages allow movements of smaller units, analysis presented there does not derive the difference between pronoun shift and object shift of full DPs.
3.7 Third approximation: V2 without positions

hence more orderings ensue. Whether DP scrambling, rather than merely VP scrambling is allowed, could be related to the presence of morphological case, but addressing this question is beyond the scope of the present work. It also seems to me that the present analysis would extend to other “second position” phenomena, either by analyzing the second position elements by attraction to $\Sigma$, or by treating them on a par with weak pronouns, i.e. elements that cannot trigger extraction from $\Sigma P$ on their own, and hence, will tend to be tagged along when $\Sigma P$ moves to the first position. This explains Norwegian patterns like the following, discussed in chapter 1 as “Bobaljik’s Paradox” [Bobaljik 1999; Nilsen 1997], where three arguments appear to be scrambling on their own, among several adverbs, where the ordering of the adverbs and the ordering of the arguments must remain unaltered.

(189)  

| a. | Derfor ga **Jens Kari kyllingen** tydeligvis ikke lenger kald. |
| b. | Derfor ga **Jens Kari** tydeligvis **kyllingen** ikke lenger kald. |
| c. | Derfor ga **Jens** tydeligvis **Kari kyllingen** ikke lenger kald. |
| d. | Derfor ga **Jens** tydeligvis **Kari** ikke **kyllingen** lenger kald. |
| e. | Derfor ga **Jens** tydeligvis **Kari** ikke lenger **kyllingen** kald. |
| f. | Derfor ga **Jens** tydeligvis ikke lenger **Kari kyllingen** kald. |
| g. | Derfor ga tydeligvis **Jens** ikke lenger **Kari kyllingen** kald. |
| h. | Derfor ga tydeligvis ikke **Jens** lenger **Kari kyllingen** kald. |
| i. | Derfor ga tydeligvis ikke lenger **Jens Kari kyllingen** kald. |
| j. | * Derfor ga **Jens** ikke tydeligvis **Kari** lenger **kyllingen** kald. |
| k. | * Derfor ga **Jens** tydeligvis ikke **kyllingen** lenger **Kari** kald. |

Such patterns are obviously problematic if one wants to assume fixed landing sites for scrambled arguments, and at the same time assume fixed positions for the adverbs. In the present account, then, we don’t have to assume fixed positions for either. The ordering of the adverbs follows from the scope requirements of the different adverbs[17] while the ordering of the arguments follows from the order of merger in the VP (linking) in addition to the restriction of scrambling to VP nodes[18].

Again, Dutch behaves essentially the same. For German, which allows argument reordering, we would simply loosen up the requirement that only VP

[17] according to the analysis developed in chapter 2, lenger ‘no longer’ must follow the negation because it is a negative polarity item, while tydeligvis ‘evidently’ must precede it because it is a positive polarity item.

[18] It should be pointed out here that my solution to Bobaljik’s paradox is independent of the question whether adverbs occur in fixed positions. Thus, one could claim that the adverbs occur in fixed positions and that remnant VP-nodes can scramble in the fashion outlined among the FPs hosting the adverbs.
nodes can scramble. As we noted above, if arguments can scramble on their own, they may not end up in the same order as they started. I give a derivation for the German sentence below, where the direct object has scrambled around an adverb and the subject.

(190) Gestern küßte den Fritz warscheinlich die Maria.
    Yesterday kissed the-ACC F probably the-NOM M

**Derivation 3.25**

\[
\begin{align*}
&\text{ Derivation 3.25} \\
&\left[\text{ΣP gestern \{küßte}_i+\text{Σ} \left[\text{die Maria} \ build{_{t_i}}\text{[den Fritz]]}\right]\right] \quad \text{MOVE die Maria} \\
&\left[\text{[die Maria]}_i\left[\text{ΣP gestern \{Küßte}_i+\text{Σ} \left[t_j \ build{_{t_i}}\text{[den Fritz]]}\right]\right]\right] \quad \text{MERGE warscheinlich and MOVE den Fritz} \\
&\left[\text{[denFritz]}_k \left[\text{warscheinlich \{[die Maria]}_i\left[\text{ΣP gestern \{küßte}_i+\text{Σ} \left[t_j \ build{_{t_i}}\text{[den Fritz]]}\right]\right]\right] \right] \right] \quad \text{MOVE ΣP} \\
&\left[\left[\text{[ΣP gestern \{küßte}_i+\text{Σ} \left[t_j \ build{_{t_i}}\text{[den Fritz]}\right]\}\right]\right] \left[\text{[denFritz]}_k \left[\text{warscheinlich \{[die Maria]}_i \ build{_{t_i}}\text{t}_k]\right]\right] \right] \end{align*}
\]

It can be seen that it is the possibility of extracting the argument [die Maria] without pied piping its dominating VP node that results in the potential for reordering. A remaining problem is Danish, where all subjects and weak pronouns must precede all adverbs, and all other arguments line up following the adverbs. In other words, Danish does not have argument shift or scrambling. This would follow if Danish must always move the VP sister of the subject out of ΣP immediately after XP movement to spec-Σ. I leave open the interesting question why this should be so.

**Periphrastic constructions** In chapter 2, (page 72) I noted that sequences of adverbs and auxiliaries in Norwegian enter into crossing scope dependencies. Hence, I concluded that there must be a rather elaborate set of movements in order to generate this. The sentence we considered was the following, where the four adverbs and the four auxiliaries are linearly separated, but semantically interspersed, as it were. In other words, the linear order in (191b) reflects the semantic scope of the adverbs and auxiliaries in (191a). However, while (191a) is perfectly grammatical, (191b) is sharply ungrammatical.

(191) Norwegian

a. . . .at det ikke lenger alltid helt kunne ha blitt
   . . .that it not any.longer always completely could have been
   fixed

   ordnet.
Third approximation: V2 without positions

b. *...at det ikke kunne lenger ha altid blitt helt
...that it not could any longer have always been completely
fixed

The same observation can be made on the basis of Dutch data. Thus, (192) is a similar example in this language.

(192) ...dat het niet meer helemaal kon worden gemaakt
...that it not any longer completely could be fixed

In chapter 2, I suggested that this can be derived by letting adverbs attract projections of verbs, and verbs attract projections of adverbs. I repeat the derivation I gave there for the Norwegian sentence.

What could be driving all these movements? Of course, we could stipulate that all these expressions are lexicalized with uninterpretable V-features and Adv-features, but that does not lead to any further understanding of why the movements should apply. Another possibility is that they are driven by an adjacency requirement on the auxiliaries. This also seems rather unsatisfactory; we should probably rather derive the adjacency requirement from something more fundamental. The auxiliaries enter into selectional relations with each other, and it might be that the reason for all the movements is that each auxiliary must be adjacent to the auxiliary (verb) it selects. For example, auxiliary ha ‘have’ selects for a participial complement, while kunne ‘could’ selects for an infinitival complement. If an intervening adverb would block the selection relation, this could suffice to drive the movements. This would leave some room for variation with respect to how exactly a language chooses to satisfy the requirement. Thus, for lack of any better account, I assume that this is how the movements are triggered. Note that, if the adverb projections had not moved in derivation 3.26, the verbs would not end up being adjacent.

Suppose that, in a configuration like figure 3.7, the four nodes $x_{p1}, x_{p2}, y_p, x$ are ‘equidistant’ to $\alpha$. If we raise $y_p$ to spec-$\alpha$, and subsequent attractors will iterate this option, we will derive climbing of $y_p$ to the first position. If we, instead, move the entire complement of $\alpha$, $x_{p1}$, and later iterate this option, we derive roll-up structures. Both options are needed to derive the ordering patterns of verbal clusters. If we extract the head of $x_p$, and later on iterate this, we end up with the order of merger. This is illustrated in derivation 3.27. This derives the English pattern, where adverbs and verbs are interspersed. The verbs are adjacent at the point of merger. The fourth option is to move $x_{p2}$. This option we have already illustrated in derivation 3.26 for Norwegian facts. Given what we have seen so far, these derivational options seem to be parameters that are fixed for entire categories.

---

19 Some questions arise with respect to interaction of two kinds of x-raising at the same time. For example, one could investigate whether some otherwise possible orderings of Dutch verbal clusters are ruled out in the presence of a preceding crossing-scope adverb cluster.
An approach along these lines could be extended to roll-up structures like the ones found in German. I will not do that here, but see Koopman and Szabolcsi (2000) for an analysis of verbal clusters along similar lines for several languages.
3.7 Third approximation: V2 without positions

![Diagram](image)

Figure 3.7: x-raising configuration

**Derivation 3.27**

\[
\begin{aligned}
\text{[vp2 completely [vp1 fixed]]} \\
\text{MOVE fixed} \uparrow
\end{aligned}
\]

\[
\begin{aligned}
\text{[vp2 fixed]}_1 \text{ [vp2 completely [vp1 t1]]} \\
\text{MERGE been and MOVE completely} \uparrow
\end{aligned}
\]

\[
\begin{aligned}
\text{[vp3 completely]}_j \text{ [vp3 been [vp2 fixed]}_i \text{ [vp2 tj [vp1 t1]]]} \\
\text{MERGE always and MOVE been} \uparrow
\end{aligned}
\]

\[
\begin{aligned}
\text{[vp4 been}_{k} \text{ [vp4 always [vp3 completely]}_j \text{ [vp3 tk [vp2 fixed]}_i \text{ [vp2 tj [vp1 ti]}]} \\
\text{MERGE have and MOVE always} \uparrow
\end{aligned}
\]

\[
\begin{aligned}
\text{[vp5 always}_{i} \text{ [vp5 have [vp4 been}_{k} \text{ [vp4 t1 [vp3 completely]}_j \text{ [vp3 tk [vp2 fixed]}_i \text{ [vp2 tj [vp1 ti]}]}]} \\
\text{MERGE any.longer and MOVE have} \uparrow
\end{aligned}
\]

\[
\begin{aligned}
\text{[vp6 have}_{m} \text{ [vp6 any.longer [vp5 always}_{i} \text{ [vp5 tm [vp4 been}_{k} \text{ [vp4 t1 [vp3 completely]}_j \text{ [vp3 tk [vp2 fixed]}_i \text{ [vp2 tj [vp1 ti]}]]]]]} \\
\text{MERGE could and MOVE any.longer} \uparrow
\end{aligned}
\]

\[
\begin{aligned}
\text{[vp7 any.longer}_{n} \text{ [vp7 could [vp6 have}_{m} \text{ [vp6 tn [vp5 always}_{i} \text{ [vp5 tm [vp4 been}_{k} \text{ [vp4 t1 [vp3 completely]}_j \text{ [vp3 tk [vp2 fixed]}_i \text{ [vp2 tj [vp1 ti]}]]]]]]]} \\
\text{MERGE not and MOVE could} \uparrow
\end{aligned}
\]

\[
\begin{aligned}
\text{[vp8 could}_{o} \text{ [vp8 not [vp7 any.longer}_{n} \text{ [vp7 t0 [vp6 have}_{m} \text{ [vp6 tn [vp5 always}_{i} \text{ [vp5 tm [vp4 been}_{k} \text{ [vp4 t1 [vp3 completely]}_j \text{ [vp3 tk [vp2 fixed]}_i \text{ [vp2 tj [vp1 ti]}]]]]]]]} \\
\end{aligned}
\]

Dutch and Mainland Scandinavian would follow derivation [3.26]. In Dutch, it seems that non-verbal material from the most deeply embedded VP ends up in the adverb cluster, rather than in the verb cluster. Hence, we get “climbing” of verbal particles etc. leading to the characteristic Dutch pattern in (193) [Koopman and Szabolcsi, 2000].
Once we have formed the adverb cluster and the verb cluster, and merged the finite verb, we merge Σ and execute the analysis as before.

Embedded clauses

Finite embedded clauses are normally not V2. In particular, only so-called “bridge” predicates allow for embedded V2. I return to embedded V2 shortly. Embedded (non-V2) clauses must have a different Σ than root clauses. I assume that the complementizer is such a Σ. It has no EPP-feature, so no topicalization is possible. Furthermore, it does not attract the verb. Other than that, everything goes as before. However, since the verb is not a weak element like the pronouns, it will always trigger VP extraction from ΣP. I give the derivation for (194) in derivation 3.28.

\[(194) \ldots at \text{ Jens ofte spiser tran} \ldots that J \text{ often eats cod.liver.oil} \]

Derivation 3.28

\[
\begin{align*}
\text{[that [VP1 Jens [VP2 eats cod liver oil]]]} \\
\text{MERGE \textit{often} and MOVE VP2 ▲} \\
\text{[ [VP2 eats cod liver oil], [often [that [VP1 Jens t_i]]]]} \\
\text{MOVE ΣP ▲} \\
\text{[[[that [Jens t_i]], [often [[eats cod liver oil], t_j]]]]}
\end{align*}
\]

The question now arises whether the direct object could have extracted alone, so that the verb could become separated from it by the adverb, much as in the cases discussed for arguments in the previous subsection. The short answer is that it can. Bentzen (2002) notes that sentences like the following are, in fact, grammatical in Norwegian.

\[(195) \ldots at \text{ han spiser ofte tran.} \ldots that he \text{ eats often cod.liver.oil} \]

However, this option is quite restricted. The adverb \textit{ofte} is one of the few which can occupy this position, and substituting e.g. \textit{alltid} ‘always’ or other adverbs for \textit{ofte} leads to degradedness. It remains to be understood what governs the availability of orders like (195).

For OV languages I will assume the following, inspired by the analysis proposed by Hallman (2001). The verb moves to Σ in these cases as well, but there is no EPP-feature, hence no topicalization. In this case, what is
attraction to $C$ is the VP dominating the complementizer. Thus, essentially, the verb will be left behind in the final position, as wanted. Before attraction to $C$, scrambling works as before, i.e. with VPs in Dutch, hence leading to order preservation, and with the arguments themselves in German, leading to potential reordering of the arguments. I give the derivation for the Dutch embedded sentence (196) in derivation 3.29.

(196) . . .dat Jan Marie kuste
. . .that J M kissed

**Derivation 3.29**

\[
\begin{align*}
\Sigma P \text{ that } [VP \text{ Jan kissed Mary}]] & \quad \text{MOVE } V \uparrow \\
\text{[kissed]} \Sigma P \text{ that } [VP \text{ Jan t-i Mary}]] & \quad \text{MERGE } C \text{ and MOVE } \Sigma P \uparrow \\
\text{[CP } \Sigma P \text{ that } [VP \text{ Jan t-i Mary}]] \text{[kissed, t-j ]}
\end{align*}
\]

The bracket to the immediate left of *kissed* in derivation 3.29 is not labelled. Given that the verb is attracted there by $\Sigma$, it should be a $\Sigma P$. Hence, one might wonder why we do not get Vf first, and complementizer second. We need the $\Sigma$ to pied-pipe its specifier just in case it is not realized by *dat*, and similarly for German. This problem is similar to the question raised by the traditional analysis of V2, namely why CPs do not allow multiple adjunction (in V2 languages). I speculate that the answer should ultimately be given in phonological terms. In other words, *dat* wants to be leftmost in an intonation phrase as do topic switchers. Such prosody-semantics/pragmatics correspondences have been explored for focus and stress by Reinhart (1995); Szendró (2001). Working out such an account in detail for topic switch and intonation phrasing is beyond the scope for the present dissertation.

Note that we can use the same account for pronoun-shift and scrambling in Dutch as the one we explored for Norwegian above. In particular, weak pronouns are expected to immediately follow the complementizer, unless they have been extracted along with other material from $\Sigma P$ prior to $\Sigma P$ fronting. In either case they will end up preceding the verb. Our account also explains why one part of HG holds for Dutch, namely that objects cannot scramble around subjects. This follows if Dutch, like Norwegian, does not allow scrambling of arguments on their own, but only of VP nodes. Finally, we have an explanation why the other part of HG does not appear to hold for Dutch: Scrambling is not contingent on verb movement in this language. This now follows from the fact that the verb (in embedded clauses) is attracted and then stranded by $\Sigma_{\text{dat}}$. In Norwegian, $\Sigma_{\text{dat}}$ does not attract the verb, so, since only VP-nodes can move,
objects must end up following the verb.\footnote{An alternative formulation would be to say that also the Norwegian complementizer attracts the verb, but that the verb pied-pipes the VP in this language. The choice between the two alternatives hinges on the proper explanation of examples like (195).}

### 3.7.2 \( \Sigma P \) fronting

Why does \( \Sigma P \) have to move to the beginning of the clause? Are there any languages where it does not? Suppose that there are. Such a language would have sentences with the word-order of penultimate steps of the derivations above for Norwegian. In other words, it would have a designated XP position left adjacent to the finite verb, it would generally move arguments to the left of this XP position, and, finally destressed material, like weak pronouns would occur to the right of the verb. If wh-movement is thought of as movement to spec-\( \Sigma \), this language would also have a wh-phrases to the immediate let of the finite verb, though clause internally. In fact, Jayaseelan (2001) shows that the Dravidian language Malayalam has precisely such properties and proposes an analysis which is congenial to the one I am proposing in several respects. In other words, Malayalam is generally OV, and wh-phrases must immediately precede \( Vf \).\footnote{Jayaseelan (2001) points out that \( Vf \) left-adjacent wh-phrases of this sort are also found in Hungarian, Basque, and several African languages, like Aghem, Chadic and Kirundi. For this, I refer the reader to Jayaseelan’s work and references cited there.}

\begin{equation}
\text{(197)}
\begin{align*}
a. \quad & \text{ninn-e aar\textendash\texttt{\textit{\textsc{Ticcu}}}?} \\
& \text{you-acc who beat-PAST} \\
b. \quad & \text{iwiTe aar\textendash\texttt{\textit{\textsc{uNTe}}}?} \\
& \text{here who is} \\
c. \quad & \text{awan ewiTe pooyi?} \\
& \text{he where went} \\
d. \quad & \text{nii aa pustakam aar\textendash\texttt{\textit{\textsc{kk}}} kiDuttu?} \\
& \text{you that book who-DAT gave}
\end{align*}
\end{equation}

\begin{equation}
\text{(198)}
\begin{align*}
a. \quad & \text{*aar\textendash\texttt{\textit{\textsc{ninn-e}}} a\texttt{\textit{\textsc{Ticcu}}}?} \\
& \text{who you-acc beat-PAST} \\
b. \quad & \text{*aar\textendash\texttt{\textit{\textsc{wiTe}}} aar\textendash\texttt{\textit{\textsc{uNTe}}}?} \\
& \text{who here is} \\
c. \quad & \text{*ewiTe awan pooyi?} \\
& \text{where he went} \\
d. \quad & \text{*nii aar\textendash\texttt{\textit{\textsc{kk}}}aa pustakam kiDuttu?} \\
& \text{you who-DAT that book gave}
\end{align*}
\end{equation}

More or less focused material occurs to the left of the verb, as seen in (199), and, finally, destressed material can occur to the right of \( Vf \).\footnote{Jayaseelan (2001) points out that \( Vf \) left-adjacent wh-phrases of this sort are also found in Hungarian, Basque, and several African languages, like Aghem, Chadic and Kirundi. For this, I refer the reader to Jayaseelan’s work and references cited there.} The latter option is unavailable or indefinite noun phrases.
3.8 Summary

In this chapter, I have argued that there are strong reasons to reject the standard analysis of V2 in terms of head movement to C with subsequent topicalization. I argued that Mainland Scandinavian V2-violations with focus particles

(199) naïan innale Mary-k’k’z oru kattε ayaccu
I yesterday Mary-DAT a letter sent

(200) a. aarum kaND-illa, aana-ye
    nobody saw-NEG elephant

b. aarε ayaccu, ninn-e?
    who sent you-ACC

c. ?* naïan awan-ayaccu, oru kattε
    I he-DAT sent a letter

Jayaseelan (2001) analyzes the postverbal destressed material as occupying a high ToP, with IP moving around it, but does not give arguments for this. Malayalam is a pro-drop language, so one cannot test for weak pronouns. The postverbal topic position could in principle also be analyzed in the same way as I have analyzed Norwegian weak pronouns. Finally, the XP position is reserved for focused material in Malayalam. It is typically occupied by an indefinite noun phrase, and if there are both definites and indefinites in the clause, the indefinites must occupy XP. I take it that this gives an important clue to why ΣP does not move to the left in Malayalam: Germanic Σ is associated with topichood or switch topic, hence it must move out of the “focus area of the clause.” If we assume with Cinque (1993) that the main stress of the clause falls on the most deeply embedded constituent on the recursive side of the tree, we can make sense of this. I follow Reinhart (1995) in assuming that the focus of a sentence must contain the main stress of the clause. This explains why focused material must extract from ΣP prior to ΣP fronting. The reason why weak pronouns are allowed to stay in ΣP must then be related to the fact that weak pronouns are not good switch topics. Weak pronouns function like discourse variables; they can never cause topic switch, and, as is well known, can never be focused or contrasted (Kayne, 1975). Other material does not have this deficiency. they can be contrasted and focused , and they can also cause topic switch. The fact that all potential topic switchers must evacuate ΣP suggests the following generalization:

Generalization 4 (Unambiguous Topic Switch) ΣP may contain at most one potential topic switcher.

Whether this is the right formulation remains to be seen. If it is, it would have to be derivable from more fundamental considerations about topics and topic switch. I will leave that for future investigation.
V2 and Holmberg’s Generalization, when seen in conjunction with the behavior of weak pronouns, in particular Holmberg’s Generalization, strongly suggest that the verb ends up in the left periphery of the clause by means of an XP-movement, rather than a head movement operation.

On the proposed account, the part of HG concerning weak pronouns is handled by assuming that weak pronouns do not move on their own. They do not trigger VP-movement out of ΣP, hence they must stay inside the fronted ΣP when they can, i.e. when nothing else triggers movement out of ΣP of a VP-node containing them. HG concerning argument shift of full noun phrases follows if verbs that do not move to Σ trigger extraction of their dominating VP-node out of ΣP prior to ΣP-fronting. Such extraction will necessarily take arguments following the verb along. Hence, full DP can “scramble” among sentential adverbs, just when they have not been taken along in ΣP-extraction triggered by a verb. When arguments can scramble, they must always end up in the same order as before scrambling. This follows from the assumption that scrambling of arguments in Scandinavian and Dutch is really movement of VP-nodes. Hence, because of the extension condition, one cannot reverse the relative ordering of scrambled arguments in these languages. The possibility in German of such order reversal is due to the fact that arguments in this language can scramble on their own, i.e. DPs rather than VPs scramble in German.

I have argued that no reference needs to be made to specific Topic Phrases and Focus Phrases, as was done in section 3.5. Instead a “dynamic” interpretation of notions like topic and focus, along with default stress assignment rules can drive the movement operations required to derive the observed word-order patterns. This suggests that Last Resort should not be stated in terms of feature checking, which only indirectly affects the interfaces. Rather, it should be stated as interface requirements directly. This has the potential of solving (or at least reducing) a frequently noted problem with ‘remnant movement’ analyses, namely that it is hard to see how all the movements could be triggered. If the current proposal is on the right track, this suggests that one should not look for formal (uninterpretable) features that trigger each movement operation. Rather, it seems that several operations can be triggered in order to satisfy one interface requirement, such as generalization 4.