The degree of verb movement in embedded clauses in three varieties of Norwegian

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Abstract:

The position of the verb(s) in embedded non-V2 contexts varies in Norwegian dialects. In Eastern Norwegian (EastN), all verbs have to follow all adverbs in non-V2 contexts. In Tromsø Northern Norwegian (TrNN) main verbs and non-finite auxiliaries have to follow all adverbs, but finite auxiliaries may precede adverbs they take scope over. In Regional Northern Norwegian (ReNN) all finite verbs (main/auxiliary) may precede all adverbs, and non-finite auxiliaries may precede adverbs they take scope over. These data are accounted for within a remnant movement approach. The variation between the three dialects is argued to follow from differences in how selectional features on auxiliaries and T are checked. It is suggested that auxiliaries are associated with a pair of functional projections (so-called lifters): a VP lifter below and an AdvP lifter above. An auxiliary with these lifters 'sinks' below adverbs it takes scope over. Overt feature checking (through adjacency) occurs when the lifters are present; covert feature checking occurs when the lifters are absent. In EastN, overt feature checking, and the lifters, is obligatory for all auxiliaries; in TrNN this is obligatory for non-finite auxiliaries but optional for finite auxiliaries; in ReNN this is optional for all auxiliaries.

1. Introduction

All the Scandinavian languages are Verb Second (V2) languages, but only Icelandic and some varieties of Faroese are generally assumed to have verb movement across adverbs in embedded non-V2 contexts (the Icelandic example in (1) is taken from Vikner 1995:139):

(1) a. Ég spurði [af hverju Helgi hefði **oft** lesið þessa bók]. (Ice)
I asked why Helgi had often read this book

b. Jeg spurte [hvorfor Helge **ofte** hadde lest denne boken].(Nor)
I asked why Helge often had read this book.the
'I asked why Helge often had read this book.'

As Nilsen (2003) has pointed out, in embedded clauses with multiple verbs and multiple adverbs, all verbs have to follow all clause-medial adverbs in Norwegian (and in the standard varieties of the other Mainland Scandinavian languages as well):

(2) ... at det **ikke lenger alltid helt** kunne ha blitt ordnet.
... that it not any.longer always completely could have been fixed

However, some non-standard varieties of the Mainland Scandinavian languages do allow verbs preceding adverbs in embedded (non-V2) contexts. This is the case for the Swedish dialect of Kronoby, Finland (cf.

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Platzack and Holmberg 1989, Alexiadou and Fanselow 2002) and Northern Norwegian (Iversen 1918, Bentzen 2003, Bentzen 2005, Wiklund et al. to appear). In this paper I show how the degree of verb movement in embedded non-V2 contexts varies in three varieties of Norwegian. The three varieties discussed are (i) a South-Eastern variety here labelled Eastern Norwegian (EastN)[1], reflecting speakers from Oslo, (ii) Tromsø Northern Norwegian (TrNN), which is the dialect spoken in the city of Tromsø, and (iii) Regional Northern Norwegian (ReNN) corresponding to various other dialects spoken in Northern Norway, excluding the city of Tromsø[2]. The patterns found in these dialects are analysed within a remnant movement account.

10 informants (2 speakers of EastN, 4 speakers of TrNN and 4 speakers of ReNN[3]) were tested for 23 embedded (non-V2) clauses containing multiple auxiliaries and one adverb (*heldigvis* 'fortunately,' *alltid* 'always,' *aldri* 'never,' *allerede* 'already,' *som oftest* 'usually,' or *så often* 'so often'). For each of the 23 clauses, the informants were asked to indicate in which positions they would allow the adverb to appear. An example of a typical test sentence is given in (3):

(3) Det er få som planlegger å se denne filmen på kino...
it is few who plan to see this film.the on cinema...

... ettersom mange **(allerede)** har **(allerede)** kunnet **(allerede)**...
... as many (already) have (already) could (already)...

... lastet den ned til sin egen datamaskin.
... loaded it down to their own computer

'Few people are planning to see this film in the cinema as many people have already been able to download it to their own computer.'

It is important here to point out the difference between the constructions discussed in this paper and so-called embedded V2. Embedded V2 is an option in all the Germanic languages in certain embedded contexts, typically in *that*-clauses embedded under so-called *bridge*-verbs (*say, tell, think, believe,* etc.). Such clauses allow verbs preceding adverbs, as illustrated in (4a), but crucially, they also allow non-subject topicalization and then subject-verb inversion is obligatory, as in (4b). Thus, they have been analysed as embedded V2 with verb movement to the CP domain (cf.

[1] In the relevant respects, the patterns found in EastN correspond to what is usually claimed for 'Standard Norwegian.'

[2] Informants were from as far south as the Salten region to Alta in the North.

[3] In addition, the author is also a speaker of ReNN.

among others Vikner 1995, 1997, as well as Julien 2006 and Bentzen et al. 2007 for more recent discussions of embedded V2 in Scandinavian).

(4) Hun fortalte... (Norwegian)
she told...
'She told me...'
a. ... [$_{CP}$ [$_{C}$ at [$_{CP}$ hun [$_{C}$ kjøpte ofte dyre klær]]]].
that she bought often expensive clothes
'... that she often bought expensive clothes.'
b. ... [$_{CP}$ [$_{C}$ at [$_{CP}$ **ifjor** [$_{C}$ kjøpte hun ofte dyre klær]]]].
that last-year bought she often expensive clothes
'... that she often bought expensive clothes last year.'

These potential embedded V2 clauses contrast with embedded contexts in which V2 is not possible. In most adverbial embedded clauses (e.g. conditionals, purpose clauses, certain clauses of reason, etc.), as well as in embedded *wh*-questions and relative clauses, embedded V2 is not an option in Mainland Scandinavian in general. This is illustrated with an embedded *wh*-question in (5), and an adverbial clause of reason introduced by *ettersom* 'as' in (6). In both cases, topicalization of a non-subject followed by subsequent subject-verb inversion is impossible:

(5) *Jeg spurte hvorfor **denne boken** hadde Helge lest ofte. (Norw)
I asked why this book.the had Helge read often

(6) *Hun ruinerte seg ettersom **ifjor** kjøpte hun ofte... (Norw)
she ruined REFL as last-year bought she often
... dyre klær.
expensive clothes

It has traditionally been claimed that there is no verb movement at all in such non-V2 contexts in the Mainland Scandinavian languages. However, as will be shown in this paper, dialects spoken in Northern Norway to various degrees allow verbs preceding adverbs in such contexts:[4]

(7) Æ spurte koffer han Helge **hadde** så ofte lest denne boka. (TrNN)
I asked why he Helge had so often read this book.the
'I asked why Helge so often had read this book.'

(8) Ho ruinerte sæ ettersom ho **kjøpte** ofte dyre klær. (ReNN)
she ruined REFL as she bought often expensive clothes
'She drove herself to economic ruin as she often bought expensive clothes.'

[4] Here and in the following, the Northern Norwegian examples are rendered in an approximate dialectal orthography.

In section 2 I present the verb placement patterns found in three varieties of Norwegian. Section 3 briefly discusses two potential approaches to the data at hand; a head movement account à la Cinque (1999) and a 'multiple adjunction points for adverbs' account à la Ernst (2002) and Svenonius (2002). Both of these approaches are shown to be problematic when faced with the Norwegian data. In section 4 I explore in more detail how a remnant movement approach can account for the dialectal differences found concerning verb placement in Norwegian embedded clauses. Section 5 concludes the paper.

2. Verb placement in non-V2 contexts in three varieties of Norwegian

As mentioned in section 1, Norwegian is generally assumed to not allow verb movement in embedded non-V2 clauses. This is indeed the case in EastN, where the only accepted position for adverbs is preceding all the verbs, as illustrated in (9)-(11). All other potential positions were rejected by the informants.

However, the two Northern varieties of Norwegian allow verbs preceding adverbs to varying degrees, notably more so in ReNN than in TrNN. Several factors seem to play a role in determining whether or not a given verb may precede a given adverb. First of all, the kind of adverb matters. In both TrNN and ReNN, verbs more easily precede certain adverbs (such as *allerede* 'already'), than others (such as *alltid* 'always'). This is illustrated in examples (9) and (10). In TrNN, finite auxiliaries may precede adverbs such as *allerede* 'already,' but have to follow adverbs such as *alltid* 'always.' A parallel restriction with respect to the kind of adverbs holds for non-finite auxiliaries in ReNN, see (9) vs. (10).

(9) Vi begynte å bli spente nå...
we began to become excited now

EastN:	√	*	*
TrNN:	√	√	*
ReNN:	√	√	√

... ettersom vi (allerede) **ville** (allerede) **kunne** (allerede)...
as we (already) would (already) could (already)

... **vite** resultatet på fredag.
know result.the on Friday

'We started to get excited now as we would be able to know the result already on Friday.'

(10) Vi skjønte ikke hvorfor de var så overrasket...
we understood not why they were so surprised

... over at vi hadde et ekte Munch-maleri...
over that we had a real Munch-painting

EastN:	√	*	*
TrNN:	√	*	*
ReNN:	√	√	*

... ettersom alle vel (alltid) **måtte** (alltid) **ha** (alltid) **visst** det.
as all well (always) must (always) ha (always) known it

'We didn't understand why they were so surprised that we had a real Munch-painting as everyone presumably always must have known that.'

Secondly, the finiteness of the verb influences whether or not it can precede a given adverb. This is again illustrated in the above examples. (9) shows that in TrNN, finite but not non-finite auxiliaries may precede adverbs like *allerede* 'already.' Again we see a parallel contrast in ReNN, where finite but not non-finite auxiliaries may precede adverbs like *alltid* 'always' in (10).

Finally, the type of verb also matters for whether or not it can precede an adverb. As we saw in (9), TrNN finite auxiliaries may precede adverbs such as *allerede* 'already,' *som oftest* 'usually,' and *så ofte* 'so often.' However, as can be seen from (11), finite main verbs have to follow such adverbs in this dialect. In contrast, in ReNN, also finite main verbs may precede these adverbs (and in fact any other adverb):

(11) Hedda kommer til å ruinere seg...
Hedda comes to to ruin REFL

EastN:	√	*
TrNN:	√	*
ReNN:	√	√

... ettersom hun (så ofte) **kjøper** (så ofte) dyre klær.
as she (so often) buys (so often) expensive clothes

'Hedda will drive herself to economic ruin as she so often buys expensive clothes.'

The verb movement patterns found in the three varieties of Norwegian can be summarized as follows: In EastN, all verbs have to follow all adverbs, regardless of the type of adverb, regardless of finiteness of the verb, and regardless of whether the verb is an auxiliary or a main verb. In TrNN, all

main verbs as well as non-finite auxiliaries have to follow all adverbs, regardless of the type of adverb. Finite auxiliaries, however, may precede or follow certain adverbs (*allerede* 'already,' *som oftest* 'usually,' and *så ofte* 'so often') but have to follow others (*heldigvis* 'fortunately,' *alltid* 'always,' and *aldri* 'never'). In ReNN, all finite verbs may precede or follow all adverbs, regardless of whether the verb is a main verb or an auxiliary, and regardless of the type of adverb. ReNN non-finite auxiliaries pattern with TrNN finite auxiliaries in that they may precede or follow only certain adverbs (*allerede* 'already,' *som oftest* 'usually,' and *så ofte* 'so often'), whereas they have to follow others (*heldigvis* 'fortunately,' *alltid* 'always,' and *aldri* 'never').

3. Two approaches to the order of verbs and adverbs[5]

3.1 Hierarchy of adverbs and head movement (Cinque 1999)

According to Cinque (1999), adverbs are ordered in a strict universal hierarchy, and they are positioned in the specifier of their own functional projections. Nilsen (1998, 2003) and Østbø (2003) have shown that the internal order of adverbs in Norwegian corresponds well to the hierarchy Cinque proposed for Italian adverbs. For the position of verbs with respect to these adverbs, Cinque assumes that verbs may move to the intervening heads of the adverb projections. A point of language variation concerns how high the verb may move. Applying this approach to the Norwegian data, one would assume that EastN does not allow any verb movement out of the VP, resulting in all verbs following all adverbs. TrNN and ReNN, in contrast, will allow verbs to move to some of the higher head positions in the structure, thus yielding orders where a verb precedes certain adverbs:

(12) [... **ville**$_i$ [$_{\text{AspAnteriorP}}$ allerede [**t**$_i$ kunne vite resultatet]]] (TrNN/ReNN)
would already could know result.the

(13) [... **måtte**$_i$ [$_{\text{AspPerfectP}}$ alltid [**t**$_i$ ha visst det]]] (ReNN)
must always have known it

However, there are several problematic issues for this approach. First of all, the restrictions on verb movement observed in TrNN and ReNN do not necessarily correspond to 'height' in terms of Cinque's hierarchy. As just mentioned, the internal order of adverbs in Norwegian seems to follow this hierarchy. Assuming that movement of the verb to the head positions of these adverb projections proceeds cyclically, one would expect verb movement to a high head position to entail verb movement to a lower head

[5] See Bentzen (2005) for at more detailed discussion of a head movement account and a 'multiple positions for adverbs' account for Norwegian data.

position. Thus, in languages or dialects where the verb may precede an adverb which is high in the Cinque hierarchy, one would by transitivity expect the verb to also be able to precede a lower adverb. In the case of the high adverb *heldigvis* 'fortunately' and the lower adverbs *allerede* 'already' and *som oftest* 'usually,' such transitivity effects are indeed observed. Verbs which may precede the higher adverbs in TrNN and ReNN, may also precede the lower adverbs. However, this is not true for all pairs of adverbs in the hierarchy. Recall that finite TrNN and non-finite ReNN auxiliaries may precede or follow the adverbs *allerede* 'already' and *som oftest* 'usually,' but have to follow the adverb *alltid* 'always.' This is unexpected following Cinque's hierarchy. As the position of *always* is lower in the hierarchy than those of *already* and *usually*, we would by transitivity expect that verbs that may precede *already* and *usually* also may precede *always*. But as we saw above, this is not the case. Rather we have a situation like the one illustrated in (14):

(14) [√**V** [$_{\text{AspHabP}}$ som oftest √**V** [$_{\text{AspAntP}}$ allerede ***V** [$_{\text{AspPerfP}}$ alltid √**V** ...
usually *already* *always*

One way of accounting for this is to allow some flexibility in the hierarchy of adverbs. Cinque (2004) indeed suggests that some adverbs may occur in more than one position, related to different interpretations. Potentially, there could be (at least) two positions for *always*, one above the adverbs *usually* and *already*, and one below them. Apparently then, only the higher *always* is ever realized in TrNN and ReNN, and the crucial end point for verb movement of finite auxiliaries in TrNN and of non-finite auxiliaries in ReNN is somewhere between *usually* and the higher *always*. This could perhaps account for the observations concerning the position of the verb with respect to the adverbs, but it would predict an unattested internal order of adverbs, *always* < *usually*.[6]

A second and probably more serious challenge for a head movement approach is how to deal with the ReNN cases where more than one verb precedes a given adverb. This kind of problem has been pointed out for a head movement account several times, and is known as *Bobaljik's Paradox* (cf. Bobaljik 1999, Svenonius 2002). In certain cases, ReNN allows more

[6] A search on Google (on February 2, 2007) for the sequences *"alltid som oftest"* 'always usually' and *"som oftest alltid"* 'usually always' yielded 24 hits for the former and 89 hits for the latter. Note, however, that practically all the 24 hits for *"alltid som oftest"* were irrelevant constructions, where the two adverbs where separated either by a comma or a slash sign. In contrast, the majority of the 89 hits for *"som oftest alltid"* where genuine multiple adverbs contexts. See also Beijer (2005) on the internal order of adverbs in Swedish.

than one auxiliary to precede an adverb such as *allerede* 'already.' Assuming that both auxiliaries are merged below the adverb, both must have moved past it, resulting in a violation of the Head Movement Constraint:

(15) [... **ville**$_i$ **kunne**$_j$ [$_{\text{AspAnteriorP}}$ allerede [**t**$_i$ **t**$_j$ vite resultatet]]](ReNN)
would could already know result.the

Cinque (2004) argues that this problem also can be accounted for by assuming that certain adverbs may be merged in more than one position. For cases like (15) one would then assume that the adverb *already* can be merged either above or below the finite auxiliary. In case both auxiliaries precede the adverb, the adverb is merged in the lower position, and only the non-finite auxiliary has moved across it. At first glance, this seems to solve the problem with the HMC violations. However, on closer inspection, this argument is not so straightforward.

First of all, Cinque (2004) suggests that the different positions of adverbs are related to different interpretations of the adverbs. However, in TrNN and ReNN it is not clear that this is the case. Sentences such as (9)-(11) do not necessarily get different readings depending on where the adverb appears. Furthermore, all adverbs in the mid to low range of the Cinque hierarchy may occur in the position where *already* occurs in (15). This would suggest that the majority of adverbs in Norwegian may be merged in more than one position. Clearly, this is not a welcome consequence for the hierarchy, as the internal order of adverbs no longer can be explained by assuming a strict universal order. Additional assumptions would be needed to prevent the possibility that a lower adverb in the hierarchy is realized in its higher position, preceding the finite auxiliary, while a higher adverb is realized its a lower position below the finite auxiliary, yielding unattested orders such as *always* < *usually*.

The Norwegian data thus present several problematic issues for a head movement approach à la Cinque (1999, 2004).

3.2 Multiple adjunction points for adverbs (Ernst 2002, Svenonius 2002)

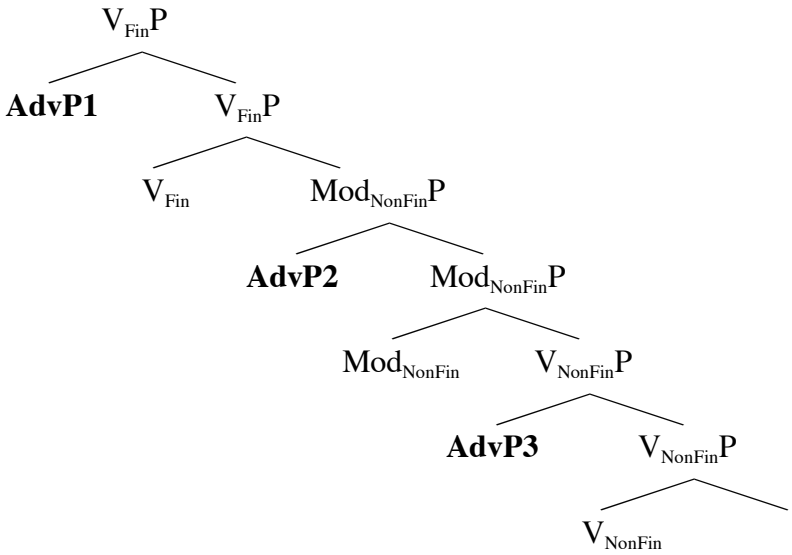
In the Cinquean approach discussed above, (projections of) adverbs have fixed positions in the clause structure. An alternative would be to assume some flexibility with respect to where adverbs are positioned.

According to Ernst (2002) and Svenonius (2002) adverbs are adjuncts and may be adjoined at various points in the structure (e.g. above VP and TP). Svenonius (2002) suggests that it is not necessary for an adverb to be adjoined immediately above the projection it modifies, as adverbial modification can ignore irrelevant intervening projections in the structure. Thus, an adverb modifying only a low projection, say the VP, may still be

adjoined in a very high position in the clause (if that should be required for other reasons). Regardless of its position, the adverb only sees the projection it modifies.

Applying this to the Norwegian varieties discussed here, EastN, TrNN, and ReNN would differ with respect to how many adjunction points for adverbs they make use of. One could assume that there are potential adjunction points above every verbal projection, and that a given adverb may in principle adjoin to any projection which c-commands the projection the adverb takes scope over. A clause with two modal auxiliaries and a main verb, would have the following potential adjunction points for adverbs:

(16)



The highest adjunction point for adverbs, AdvP1, would then be employed in all the three varieties of Norwegian discussed here. Assuming along with Svenonius (2002) that adverbs may ignore irrelevant projections, this adjunction point would be available for all kinds of adverbs, regardless of which verbal projection they modify. An adverb modifying one of the lower verbal projections may simply "look past" intervening projections. In EastN, which requires that all adverbs precede all verbs regardless of the type of adverb, the type of verb, and their scope relations, this highest adjunction point is the only available position for all kinds of adverbs. TrNN would make use of both AdvP1 and AdvP2. As in EastN, AdvP1 is an available adjunction point for all adverbs in TrNN. However, in addition, certain adverbs such as *allerede* 'already,' *som oftest* 'usually,' and *så ofte* 'so often' could optionally be adjoined in AdvP2. Adverbs that are adjoined in AdvP2 but modify the lowest verbal projection may ignore the intervening projections. In ReNN, all three adjunction points for adverbs would be employed. All kinds of adverbs may be adjoined in both AdvP1 and AdvP2. But furthermore, in contrast to EastN and TrNN, ReNN

optionally makes use of AdvP3 as an adjunction point for certain adverbs, such as *allerede* 'already,' *som oftest* 'usually,' and *så ofte* 'so often.' This account would thus have to assume (at least) three adjunction points for adverbs in order to account for the Norwegian data at hand. Table 1 summarizes the distribution of the various adjunction points across the three Norwegian varieties discussed here:

Table 1: Adjunction points for adverbs in EastN, TrNN, and ReNN:

	EastN		**TrNN**		**ReNN**	
	heldigvis	*allerede*	*heldigvis*	*allerede*	*heldigvis*	*allerede*
AdvP1	√	√	√	√	√	√
AdvP2	*	*	*	√	√	√
AdvP3	*	*	*	*	*	√

However, there are some problematic issues with this approach as well. First of all, both Ernst (2002) and Svenonius (2002) suggest that the various adjunction points for adverbs are related to different interpretations. But as already pointed out in section 3.1, it is not always clear that the different positions of the adverb lead to different interpretations.

Secondly, in this approach, the scope of an adverb is not directly determined by its structural position. In a variety such as EastN, where all adverbs are adjoined in the highest position, it is not entirely clear how to account for why some adverbs only modify the VP in this position, whereas other adverbs modify larger parts of the clause in the same position. Furthermore, it is somewhat surprising that in the varieties that employ more than one adjunction point, the highest point is always preferred over the positions that reflect the scopal relations. Presumably, the scope of an adverb is encoded in the adverb itself, and this does not affect where the adverb is merged.

A third problem involves clauses containing more than one adverb. How is the internal order between the adverbs determined? As shown in table 1, this approach suggests that in ReNN both *heldigvis* 'fortunately' and *allerede* 'already' can be adjoined in either AdvP1 or AdvP2. It should therefore logically be possible to get either order of the two within a clause; one where *heldigvis* is in AdvP1 and *allerede* is in AdvP2, and one where the opposite is the case. However, as (17)-(18) show, when the two adverbs co-occur there is a strict order between them, *heldigvis* < *allerede*:

(17) ... ettersom vi **heldigvis** ville **allerede** kunne vite resultatet...
... as we fortunately would already could know result.the

(18) *... ettersom vi **allerede** ville **heldigvis** kunne vite resultatet...
... as we already would fortunately could know result.the

Following the above discussion, it appears that both the head movement account and the 'multiple adjunction points' account are problematic in various respects when faced with the data from Norwegian dialects. This does not mean that I exclude the possibility that modified versions of either of these two approaches could account for the Norwegian data. However, in the remainder of the paper, I will consider a remnant movement approach to the data at hand.

4. A remnant movement account

Nilsen (2003) has proposed a remnant movement account for the order of verbs and adverbs in Norwegian embedded clauses. Like Cinque (1999), Nilsen (2003) argues for strict merge positions for each adverb. However, in his approach, the relative underlying order of verbs and adverbs is closely related to scope. Thus, rather than having all adverbs merge above all verbs (à la Cinque 1999) or adjoined to a position c-commanding the modifiee (à la Ernst 2002 and Svenonius 2002), Nilsen (2003) suggests that each adverb is merged immediately above the verbal projection it takes scope over. For the clause in (19), he suggests that the order of merge is as in (20) (from Nilsen 2003:72). Thus, there are crossing scope dependencies between the verbs and the adverbs in the surface order in (19).

(19) ... at det **ikke lenger alltid helt** kunne ha blitt ordnet.
... that it not any.longer always completely could have been fixed

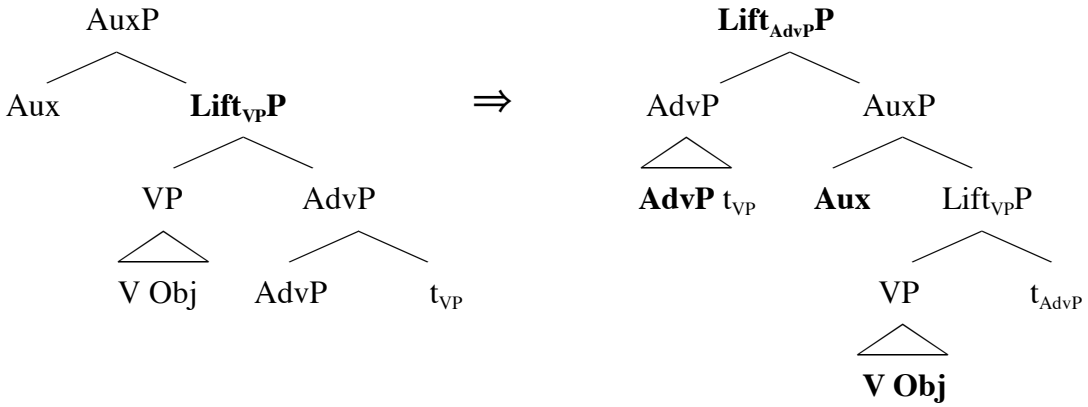
(20) ... at det **ikke** kunne **lenger** ha **alltid** blitt **helt** ordnet.
... that it not could any.longer have always been completely fixed

Nilsen analyses (19) as a result of remnant movement (cf. Hinterhölzl 1997, 1999; Koopman and Szabolcsi 2000). He argues that (19) can be derived (from the merging order in (20)) by scope-based merge and a remnant movement system in which adverbs attract the closest verbal projection, and verbs attract the closest adverb projection.

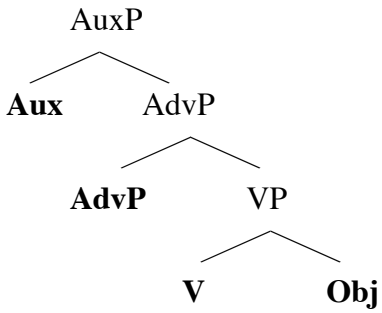
In Bentzen (2005) I explore a somewhat reformulated version of the technology in Nilsen (2003) for deriving the word order in (19). I suggest that every auxiliary may come with a pair of functional projections, one below it and one above. The projection below the auxiliary attracts the closest verbal projection. Let us call this functional projection a *VP lifter*. The VP lifter clusters the verbs together. As the verbal complement is attracted to a position (immediately) below the auxiliary, the internal order of the verbal elements is retained. The functional projection above the auxiliary attracts the closest adverb projection. Let us call this projection an *AdvP lifter*. This AdvP lifter raises the adverb (and potentially other elements) out of the way of the verb cluster. In effect, this lowers the

relative position of the verb cluster in the clause. Both lifters target the (minimum) complement containing the relevant goals (VP or AdvP), rather than extracting these goals out of complement or specifier positions. An auxiliary which has these lifters below and above it will end up following adverbs that it is merged above, i.e. that it takes scope over, as shown in (21). An auxiliary lacking these lifters will end up preceding adverbs that it takes scope over, i.e. the order of merge, as in (22).

(21) *VP lifter* below Aux: *AdvP lifter* above Aux:



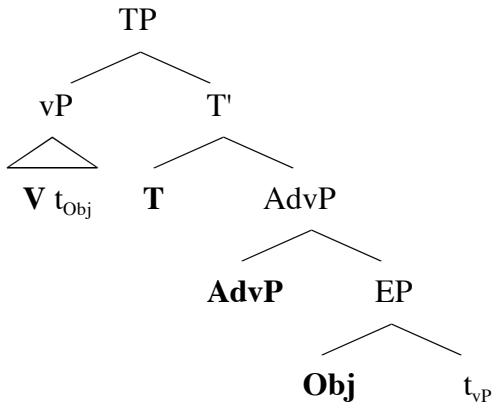
(22) No lifters below or above Aux:



Similar functional projections are discussed in Svenonius (2007). He suggests that a word order such as the one in EastN is derived through a remnant movement operation labelled 'sinking.' On the assumption that surface adjacency is the result of overt feature-checking, Svenonius proposes that an auxiliary attracts its selected complement to a projection either immediately below it, FP, or immediately above it, GP. The former projection would correspond to the VP lifter introduced above. Attracting the selected complement to GP, on the other hand, would yield the inverse order of the selecting and the selected category, e.g. V_{Ptc}–Aux (which is found in e.g. German non-V2 contexts). Furthermore, Svenonius (2007) includes an evacuation projection, EP, which attracts the complement of the selected category. This resembles the effect of the AdvP lifter in Bentzen (2005).

Overt feature checking is assumed to occur through adjacency. I here suggest that the three Norwegian varieties differ in two ways with respect to how (selectional) features are checked: (i) whether overt feature checking is required or not, and (ii) whether overt feature checking (when it occurs) is accomplished through left-right or right-left adjacency between a selecting category and its selected complement. Overt feature checking through left-right adjacency is facilitated by the presence of the pair of lifters, which yields adjacency between the auxiliary and its selected complement (cf. (21)). When the lifters are absent, the auxiliary will not (necessarily) be adjacent to its selected complement, and feature checking will take place covertly (cf. (22)). The third alternative is that overt feature checking takes place through right-left adjacency. I take this to involve movement of a projection of the selected category, e.g. vP, to the specifier of the selecting category, e.g. SpecTP. In order to ensure adjacency between the selector and the selectee, all complements of the selected category must be evacuated (to EP) prior to movement. In the case below, this involves evacuation of the direct object:

(23) Right-left adjacency:

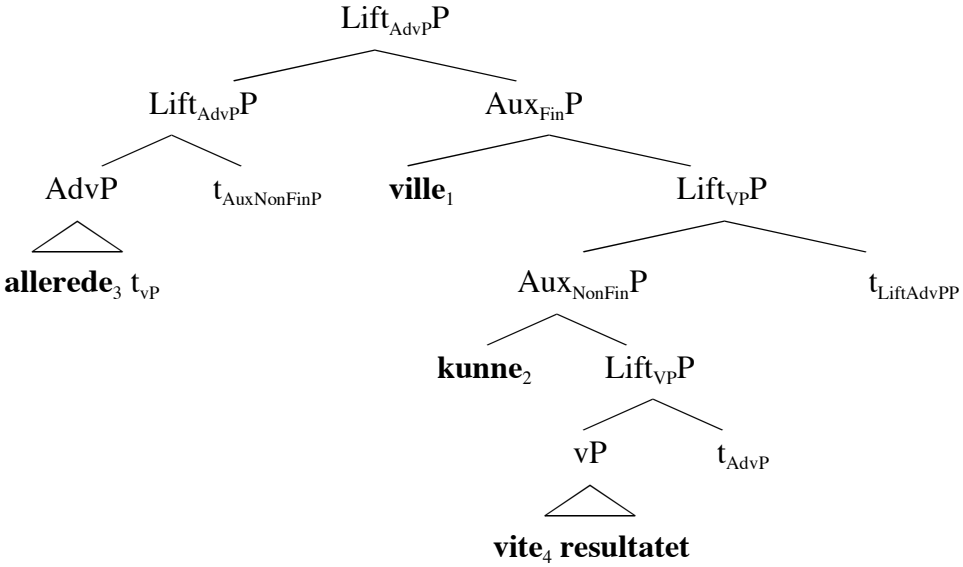


As we will see in what follows, these three possibilities are employed in various ways in the three Norwegian varieties discussed here.

Let us first consider overt feature checking through left-right adjacency. As mentioned above, an auxiliary with the lifters below and above it will end up following an adverb that it takes scope over. Recall from section 2 that in EastN all verbs always have to follow all adverbs, regardless of scope relations. In the current approach, this would be accounted for by assuming that all auxiliaries require overt checking of selectional features under left-right adjacency in this variety, i.e. all auxiliaries have the set of lifters below and above them. As we saw in examples (9)-(11), the word order where all verbs follow all adverbs is also an option in TrNN and ReNN, but it is not obligatory. Hence, feature checking under left-right adjacency, and thus the lifters, appears to be

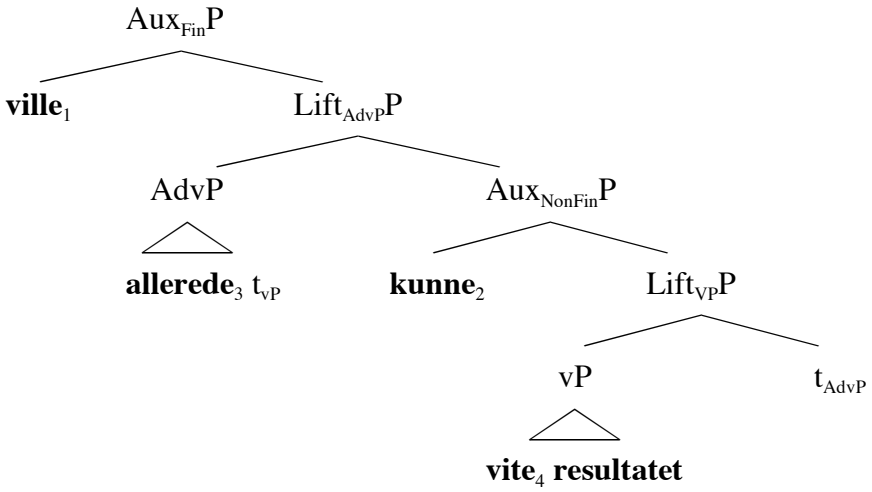
obligatory for all auxiliaries in EastN and an available option for all auxiliaries in the two Northern varieties. Derivation 1 illustrates how the order Adv_3–Aux_1–Aux_2–V_4 is derived when the lifters are present for all auxiliaries (subscripts indicate the merge order of the relevant elements):

(24) **Derivation 1:**



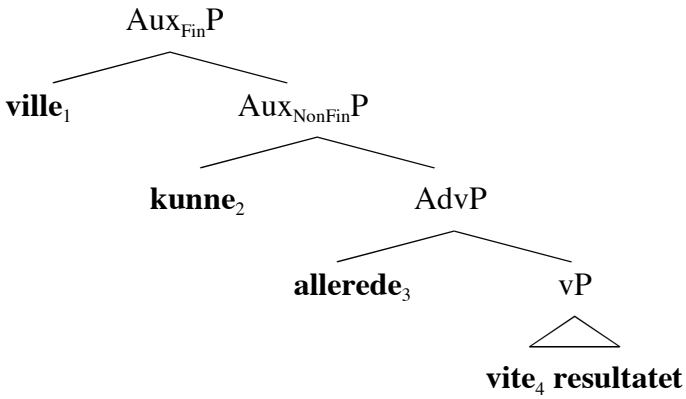
Whereas overt feature checking is obligatory for all auxiliaries in EastN, it is optional for some or all auxiliaries in TrNN and ReNN. Both TrNN and ReNN allow finite auxiliaries preceding (certain) adverbs that they take scope over. In this approach, an auxiliary lacking the pair of lifters will end up preceding an adverb that it takes scope over. The fact that TrNN and ReNN allow finite auxiliaries preceding adverbs they take scope over is accounted for by assuming that selectional feature checking is optional for finite auxiliaries in these two varieties. Consequently, the finite auxiliary lacks the set of lifters below and above it. Derivation 2 illustrates how the order Aux_1–Adv_3–Aux_2–V_4 is derived. Note that the non-finite auxiliary still has the lifters, and therefore ends up following the adverb it takes scope over:

(25) **Derivation 2:**



Finally, recall that ReNN also allows non-finite auxiliaries preceding (certain) adverbs that they take scope over, as was shown in (9). In such cases, also non-finite auxiliaries do not require overt selectional feature checking, and thus lack the lifters below and above them. In derivation 3, both the finite and the non-finite auxiliary lack lifters, and they consequently both end up preceding the adverb that they take scope over, yielding the order Aux_1–Aux_2–Adv_3–V_4, which is the order of merge:

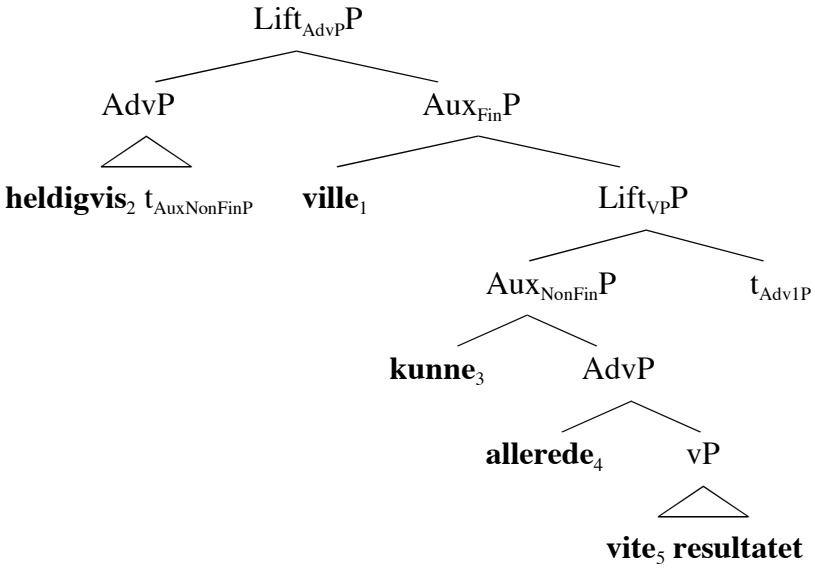
(26) **Derivation 3:**



A fourth logical possibility is of course that the non-finite auxiliary checks features covertly, i.e. lacks the lifters, whereas the finite auxiliary checks features overtly, i.e. has the lifters. In such cases, the non-finite auxiliary will end up preceding the adverb that it takes immediate scope over, whereas the finite auxiliary will follow the adverb that it takes immediate scope over. This possibility is indeed attested in ReNN. The effect of this is naturally only visible in clauses with more than one adverb:

(27) ... ettersom vi **heldigvis**$_2$ ville$_1$ kunne$_3$ **allerede**$_4$ vite$_5$ resultatet...
... as we fortunately would could already know result.the

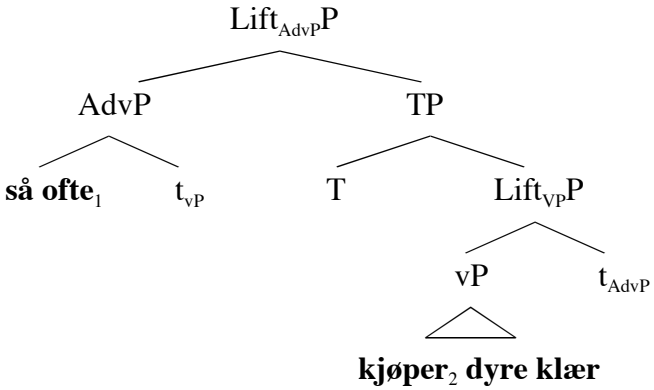
(28) **Derivation 4:**



Summing up so far, overt feature checking through left-right adjacency, and consequently the pair of lifters, is obligatory for all auxiliaries in EastN. Thus, all auxiliaries will always follow all adverbs. In TrNN, overt feature checking through left-right adjacency is optional for finite, but obligatory for non-finite auxiliaries. This results in non-finite auxiliaries always following adverbs they take scope over, whereas finite auxiliaries optionally may precede such adverbs. In ReNN, overt feature checking through left-right adjacency is optional for all auxiliaries. Thus, both finite and non-finite auxiliaries may either precede or follow adverbs that they take scope over. Derivations 1–4 illustrate how this accounts for the word order variation between the three Norwegian dialects displayed in (9)-(10).

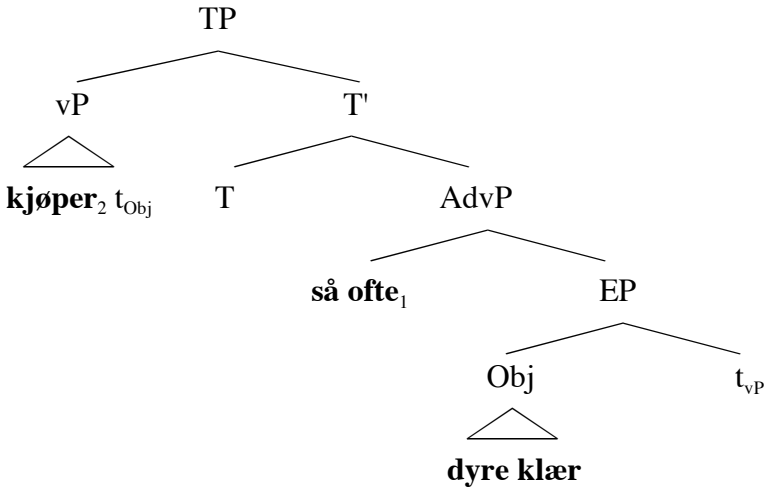
However, this does not account for the observation in (11). In EastN and TrNN, finite main verbs have to follow all adverbs, but in ReNN they may precede all kinds of adverbs. I suggest that this is the result of variation with respect to checking of features in T. In EastN and TrNN, features in T are checked in exactly the same way as selectional features on auxiliaries are checked; through left-right adjacency between T and the selected complement. Note that the effect of the lifters is vacuous in such cases, as shown in derivation 5.

(29) **Derivation 5:**



In ReNN, on the other hand, the third feature checking option discussed above is available for all finite verbs. Thus, features on T can be checked through right-left adjacency, achieved by moving vP to SpecTP. This involves evacuation of the complement(s) of the selected verb prior to vP movement. I here stipulate an evacuator projection, EP, immediately above the vP that is specified to move for feature checking (cf. also Bentzen 2006 and Wiklund et al. to appear for a similar analysis). This is illustrated in derivation 6 below. This way of feature checking is apparently not available in TrNN and EastN.

(30) **Derivation 6:**



Summing up, in this section I have discussed how a remnant movement approach could account for the variation observed with respect to verb placement in non-V2 contexts in three Norwegian dialects. The variation observed is argued to be related to different ways of checking selectional features for various auxiliaries. The proposal is that overt selectional feature checking through left-right adjacency is the only option in EastN, and this is obligatory for all auxiliaries in this variety. In TrNN, on the other hand, overt selectional feature checking through left-right adjacency is obligatory only for non-finite auxiliaries. For finite auxiliaries,

both overt and covert feature checking is possible. Finally, in ReNN, overt checking of selectional features through left-right adjacency is optional for all auxiliaries. Furthermore, features on T can optionally be checked through right-left adjacency in this variety. This is summarised in table 2.

Table 2: Feature checking options on verbal elements in three Norwegian varieties:

	Overt left-right adjacency	**Covert checking**	**Overt right-left adjacency**
EastN	all auxiliaries	—	—
TrNN	all auxiliaries	finite auxiliaries	—
ReNN	all auxiliaries	all auxiliaries	finite verbs

In this approach, the cases of verbs preceding adverbs in TrNN and ReNN illustrated in (9)-(10) do not actually reflect verb *movement*, but rather lack of verb 'sinking' (in terms of Svenonius 2007). However, the ReNN example in (11) is different. Here the finite *main* verbs precedes adverbs, and given that adverbs are merged outside of the vP, this word order truly entails verb movement.

I believe that a remnant movement approach thus can account for the variation observed between EastN, TrNN, and ReNN by assuming various degrees of verb 'sinking' and verb movement. Both verb 'sinking' and verb movement are triggered by overt feature checking, and the three Norwegian varieties differ both in whether such overt feature checking is obligatory for all, some, or none of the verbal elements, and in whether it occurs through left-right or right-left adjacency. The different manners of feature checking cause variation in the surface positions of the verbs with respect to adverbs.

5. Summary and concluding remarks

In this paper I have discussed verb placement in non-V2 embedded clauses in three varieties of Norwegian. In section 2 it was shown that whereas the southern variety EastN only allows the order where all verbs follow all adverbs, the two northern varieties to a certain extent allow verbs preceding adverbs. In TrNN, finite auxiliaries may precede certain adverbs (*allerede* 'already,' *som oftest* 'usually,' and *så ofte* 'so often'), but finite main verbs and non-finite auxiliaries have to follow all adverbs. In ReNN, all finite verbs may precede all kinds of adverbs, but non-finite auxiliaries may only precede certain adverbs (*allerede* 'already,' *som oftest* 'usually,' and *så ofte* 'so often'). In section 3 the data were briefly discussed within two approaches to the order of verbs and adverbs; a head movement account (à la Cinque 1999) and a 'multiple adjunction points for adverbs' account (Ernst 2002 and Svenonius 2002). I point out that these approaches both ran into several problems when faced with the Norwegian data. In section 4, I discussed a remnant movement analysis for the data at hand, based on

Nilsen (2003), Bentzen (2005), and Svenonius (2007). According to this approach, the differences between the three varieties are the result of different ways of checking features. Overt feature checking takes place through adjacency, and an auxiliary employs a remnant movement operation involving *lifters* to attain left-right adjacency with its selected complement. The effect of the lifters is that the verbal elements 'sink' below the adverb(s). Overt feature checking is obligatory for all auxiliaries in EastN, thus all auxiliaries have to follow all adverbs. In TrNN, this is obligatory only for non-finite auxiliaries, thus they have to follow all adverbs, whereas finite auxiliaries may precede (certain) adverbs. Finally, in ReNN, overt feature checking is optional for all auxiliaries. In addition, overt checking through right-left adjacency is available for features in T, yielding the order in which a finite main verb precedes an adverb. In this way, a remnant movement analysis is able to account for the different patterns in the three Norwegian dialects. The variation with respect to verb placement in embedded non-V2 contexts follows from variation in how the three dialects check selectional features.

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