What's the better move? On verb placement in Standard and Northern Norwegian

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Northern Norwegian (NN) allows verbs to precede adverbs in non-V2 contexts, whereas
in Standard Norwegian (StN) verbs have to follow adverbs. These facts are discussed with
respect to three different approaches to clausal structure. NN is problematic for a head
movement account (cf. Cinque 1999) because multiple verbs may precede a given adverb,
leading to violations of the Head Movement Constraint. A multiple positions account
(cf. Ernst 2002, Svenonius 2002) would assume that any adverb in StN and NN can be
adjoined to high positions, which may be problematic with respect to scope relations. A
remnant movement approach (cf. Nilsen 2003) can account for both StN and much of
the NN data by means of one generalisation, but a separate generalisation is needed for
finite verbs in NN. Thus, all three approaches are faced with challenges with respect to
the Norwegian data. However, it is argued that the remnant movement approach seems
the most promising of the three approaches.

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1. INTRODUCTION

The position of verbs with respect to adverbs has been used to argue for the
architecture of clause structure. Emonds (1978), and later Pollock (1989), discussed
the alternations found in French and English word order concerning verb placement.
The examples in (1) illustrate this difference (from Pollock 1989:367).

(1)   a.   Jean embrasse souvent Marie.   (Fr)
               John kisses   often   Marie
               'John often kisses Marie.'
        b.   John often kisses Mary.   (Eng)

Emonds and Pollock assume that adverbs mark the edge of the VP. Pollock explains
the difference between French and English by suggesting that main verbs in French
must appear to the left of the adverb *souvent* 'often' because of its rich agreement
morphology. In English, on the other hand, such movement of the verb fails to occur

because of the poverty of agreement morphology on verbs. Thus, all English main verbs (except *be*) remain to the right of the adverb.

A corresponding difference has been noted for the Scandinavian languages (cf. Kosmeijer 1986; Holmberg & Platzack 1995). Icelandic verbs show rich inflectional morphology and also appear to the left of the adverb in embedded clauses, as illustrated in (2a). In Mainland Scandinavian on the other hand, here represented by Standard Norwegian, there is no agreement morphology on the verb, and it remains to the right of the adverb in embedded clauses (2b).

(2)   a.   það er rétt [að Jón kyssir oft   Maríu].   (Ice)
              it   is true that Jon kisses often María

    b.   Det er sant [at   Jon ofte kysser Maria].   (StN)
              it   is true that Jon often kisses Maria

Within the last decade, several different analyses of the order of verbs and adverbs have been proposed. I will discuss three such recent approaches. First, Cinque (1999) and Alexiadou (1997) have both suggested that adverbs give a precise indication of the spine of the clause. Each adverb has its own fixed position in the specifier of a functional projection, and there is a universal hierarchy determining the organisation of these projections. Verbs may move to the various head positions of these projections, yielding several different V-Adv orders.

Second, Ernst (2002) and Svenonius (2002) suggest an approach with a somewhat less strict association of adverbs with functional heads in the clause, as well as less movement. They argue that adverbs adjoin to verbal projections, and that there may be multiple adjunction points for each adverb. The relative order of the verb and the adverb is determined by which projection the adverb has adjoined to, as well as (some) verb movement.

Third, Nilsen (2003) proposes yet a different account for the order of verbs and adverbs. He assumes that adverbs are adjoined right above the verb they take scope over, and that complex remnant movement operations are responsible for the various V–Adv orders found in languages.

In this paper I will discuss these three different approaches to clausal architecture in the light of data from Standard Norwegian and Northern Norwegian (henceforth StN and NN, respectively). It will be shown that a head movement account à la Cinque (1999) runs into problems with the NN data. A 'multiple positions' approach and a 'remnant movement' approach both have advantages and disadvantages, and these will be evaluated and compared.

2. VERB PLACEMENT IN STANDARD AND NORTHERN NORWEGIAN

The Scandinavian languages are all V2 languages, in which the finite main verb moves to the second position in main clauses, (3). However, it is generally assumed

that among the national standards, only Icelandic allows verb movement in non-V2 subordinate clauses, as in (4a). In the Mainland Scandinavian languages there is no verb movement in these constructions, (4b) (Icelandic examples are based on Vikner 1995b:139):

(3) a. Af hverju hefði Helgi **oft** lesið þessa bók?   (Ice)
     b. Hvorfor hadde Helge **ofte** lest denne boken?   (StN)
         why   had   Helge often read this   book
         'Why had Helge often read this book?'
(4) a. Ég spurði [af hverju Helgi hefði **oft** lesið þessa bók].
         I asked why   Helgi had often read this   book
     b. Jeg spurte [hvorfor Helge **ofte** hadde lest denne boken].
         I asked why   Helge often had   read this   book
         'I asked why Helge often had read this book.'

This movement of the finite verb to I has been correlated to rich verbal inflectional morphology (cf. Bobaljik 1995; Vikner 1995a, b, 1997; Thráinsson 1996; Bobaljik & Thráinsson 1998; Rohrbacher 1999). Based on Germanic VO-languages, (Vikner 1995a:14) suggests that '[a]n SVO-language has V^o-to-I^o movement if and only if . . . person morphology is found in all tenses'. Thus, he assumes a strong two-way correlation between verbal morphology and independent verb movement to an inflectional position. Bobaljik & Thráinsson (1998) argue that there is a weaker one-way correlation between inflectional morphology and verb movement. According to their approach, the verb must have moved out of the VP in languages which have two or more inflectional verbal morphemes.

Both these approaches can account for the standard varieties of the Scandinavian languages. The Mainland Scandinavian languages all lack person morphology (Vikner) and they also do not have more than one inflectional morpheme on the finite verb (Bobaljik & Thráinsson). Hence there is no independent V-to-I movement in these languages. Icelandic, on the other hand, has person morphology and also has more than one inflectional morpheme on the finite verb. Thus, independent V-to-I movement is predicted in this language by both the above approaches.

However, recent studies have shown that independent V-to-I movement is possible in languages which crucially lack the sufficiently rich morphology. In Bentzen (2003) it was shown that Northern Norwegian (NN)[1] optionally allows finite verbs to move past adverbs in several non-V2 contexts such as relative clauses, subordinate *wh*-questions, and subordinate adverbial clauses, despite the fact that NN has a very impoverished verbal morphology (see also Alexiadou & Fanselow 2002 for similar facts in the Swedish dialect of Kronoby). This is illustrated here with an NN embedded *wh*-question. Topicalisation is not possible in NN embedded *wh*-questions, which suggests that embedded V2 is not an option in examples like (5) (from Bentzen 2003:581).

(5)   Vi lurte   på kem han lånte **vanligvis** penga til.   (NN)
       we wondered on who he   lent   usually   money to
       'We wondered who he usually lent money to.'

In this paper I will show that NN allows verbs to appear in several different positions in subordinate clauses. Not only may finite verbs occur in front of adverbs (as in (5)), but so may non-finite verbs. In addition, multiple verbs may precede a given adverb, making a straight-forward head movement account problematic.

NN thus differs from StN in that the former allows verbs to appear in a much wider variety of positions in subordinate clauses than the latter. In StN, all verbs always have to follow all adverbs in subordinate clauses, as illustrated in Nilsen (2003:72):

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

NN, however, allows several different permutations of the above example. Keeping the relative internal order within the four verbs on the one hand and within the four adverbs on the other, but varying the position of the verbs with respect to the adverbs, there are in all 70 possible permutations of (6). NN allows 22 of these possible permutations. When trying out these various permutations it is crucial to keep the internal order of verbs as well as of adverbs, as NN like StN only allows a strict internal order of these elements. As can be seen in (7) the order of verbs cannot be altered. The examples in (8) show that the same hierarchical order must be preserved within adverbs.

(7)   a.   De   bordene burde kunne ha   blitt vasket.
            those tables.the ought could have been cleaned
            'It ought to have been possible to have cleaned those tables.'
    b.   *De bordene burde vasket kunne ha blitt.
    c.   *De bordene burde kunne vasket ha blitt.
    d.   *De bordene burde kunne ha vasket blitt.
(8)   a.   De   bordene er uheldigvis   vanligvis alltid   opptatt.
            those tables.the are unfortunately usually   always occupied
            'Those tables are unfortunately usually always occupied.'
    b.   *De bordene er vanligvis uheldigvis alltid opptatt.
    c.   *De bordene er alltid uheldigvis vanligvis opptatt.
    d.   *De bordene er alltid vanligvis uheldigvis opptatt.

Consequently the 22 different variants of (6) allowed in NN involve only changing the position of the verbs with respect to the adverbs. A few examples are given below:[2]

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

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

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

Note that 35 of the 48 ungrammatical permutations involve the finite verb *kunne* 'could' preceding negation. Although NN verbs are allowed in a variety of positions in non-V2 contexts, they crucially cannot precede negation:[3]

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

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

However, in some non-V2 contexts finite verbs may precede high adverbs such as *sannsynligvis* 'probably' (from Bentzen 2003:580):

(11)   Han e mistenkt siden han tok **sannsynligvis** med sæ   alle pengan.
      he is suspect as   he took probably   with REFL *all money.the*
      'He is a suspect as he probably took with him all the money.'

There are restrictions on the kinds of verbs that are allowed in a position preceding such high adverbs; finite verbs are more easily accepted in this position than non-finite ones. This will be touched upon in the following sections. In addition, there seem to be slightly different patterns for different kinds of subordinate context. However, this latter issue will not be explored further in the present paper. Rather, I will focus on one type of embedded contexts here, namely clauses introduced by *ettersom* 'as'.

In general, any finite verb may precede adverbs such as *så ofte* 'so often', *allerede* 'already', *som oftest* 'usually', and *alltid* 'always' (all assumed to be positioned in

the middle of Cinque's (1999) hierarchy) in NN subordinate contexts. This is true for finite main verbs (12a), finite auxiliaries (12b), finite modals (12c), and finite passive auxiliaries (12d).

(12) a. Ho Hedda kommer til å ruinere sæ ettersom ho kjøper **så ofte**
         she Hedda comes to to ruin REFL as she buys so often
         dyre   designerklær.
         expensive designer-clothes
         'Hedda will drive herself to economic ruin as she so often buys
         expensive designer clothes.'
     b. Ho burde ikke kjøpe flere sko nu ettersom ho har **allerede**
         she should not buy more shoes now as she has already
         kjøpt tre par denna uka.
         bought three pairs this week.the
         'She shouldn't buy any more shoes now as she has already bought three
         pairs this week.'
     c. Vi leverte radioen til han Hårek ettersom han kunne **som**
         we delivered radio.the to he Hårek as he could as
         oftest reparere sånt.
         often.est fix such
         'We handed the radio over to Hårek as he could usually fix such things.'
     d. Æ trengte aldri å dekke frokostbordet ettersom det blei **alltid**
         I needed never to set breakfast-table.the as it was always
         dekt før æ sto opp.
         set before I stood up
         'I never needed to set the breakfast table as it was always set by the
         time I got up.'

Similarly, the infinitive in small clauses may precede these mid adverbs:[4]

(13) a. Han Hårek mente å kunne **som oftest** reparere radioa.
         he Hårek thought to could as often.est fix radios
         'Hårek considered himself usually able to fix radios.'
     b. Det er bare tull å måtte **alltid** kjøre innom sentrum.
         it is only nonsense to must always drive through centre
         'It is ridiculous to always have to drive through the city centre.'

Furthermore, non-finite verbs may precede adverbs in other contexts where they are not the first verb. This is particularly the case for modal auxiliaries. (14) illustrates that a modal auxiliary in the infinitive can easily precede an adverb such as *som oftest* 'usually'. In (15) a modal auxiliary in the participial form precedes the same adverb.

In both cases the adverb could also intervene between the finite and the non-finite auxiliary:

(14)　Vi stolte　på hennes bedømmelsa ettersom ho　måtte (**som oftest**)
　　　　we trusted on her　　judgments　as　　　she must　as　often.est
　　　　kunne (**som oftest**)　sies　　å ha　　rett.
　　　　could　as　often.est be-said to have right
　　　　'We trusted her judgments as it usually was the case that she could be said
　　　　to be right'.

(15)　Det gjorde ikke nå　　　at　han ikke va　blitt bedt　på festen
　　　　it　did　not anything that he　not　was been invited on party.the
　　　　ettersom han hadde (**som oftest**)　kunnet (**som oftest**)　bli lurt　　med
　　　　as　　　he had　　as　often.est could　as　often.est be cheated with
　　　　inn likevel.
　　　　in　anyway
　　　　'It didn't matter that he had not been invited to the party as it had usually
　　　　been possible to sneak him in anyway.'

However, the perfective auxiliary *ha* 'have' is much more restricted in this pre-adverb position:

(16)　Det var ikke uvanlig　　at　flere　　av studentan　strøyk på detta
　　　　it　was not uncommon that several of　students.the failed　on this
　　　　kurset ettersom man måtte (**som oftest**)　ha　　(***som oftest**)　lest　hele
　　　　course as　　　one must　as　often.est have　as　often.est read whole
　　　　pensum for å　bestå eksamen.
　　　　syllabus for to pass　exam
　　　　'It was not uncommon that several students failed this course as one usually
　　　　had to have read the whole syllabus in order to pass the exam.'

(17)　Det var ingen vits　i　å prøve å skjule sæ　bak　　store solbrilla
　　　　it　was no　point in to try　to hide　REFL behind big　sunglasses
　　　　lenger　　ettersom han ville　(**?som oftest**)　ha　　(**?som oftest**)
　　　　any.longer as　　　he would　as　often.est have　as　often.est
　　　　blitt　　gjenkjent med en　gang uansett.
　　　　become recognised with one time　anyway
　　　　'There was no point in trying to hide behind big sunglasses anymore as he
　　　　usually would be recognised at once anyway.'

Thus, it seems that non-finite modal auxiliaries more easily precede mid adverbs than do non-finite perfective auxiliaries.[5]

　　　In the remaining sections I will discuss how the three approaches to verb placement introduced in section 1 would account for these facts.

3. HEAD MOVEMENT

Following Emonds (1978) and Pollock (1989) it has commonly been assumed that the verb's position with respect to the adverb should be analysed in terms of head movement. As mentioned in the introduction Pollock (1989) argues that the difference between the French and English examples in (1a) and (1b) is due to the fact that in French the verb moves to an inflectional head above VP while in English, it remains in situ.

Holmberg & Platzack (1995) have suggested a similar analysis of the differences found within the Scandinavian languages. They argue that in all the Scandinavian languages, a finiteness operator [+F] in C triggers movement of the finite verb to C in all main clauses. However, in subordinate clauses, C is filled by the complementiser. The difference within the Scandinavian languages found in subordinate clauses is explained by the fact that in Icelandic, I has strong Agr features attracting the finite verb there overtly, whereas in Mainland Scandinavian (here illustrated by Swedish), I only has weak T features, and thus does not trigger verb movement, as illustrated below (adapted from Holmberg & Platzack 1995:75):

(18) $[_{CP} [_{C[+F]}$ að] $[_{IP}$ Jón$_i$ $[_{I[\pm T, Agr]}$ keypti$_j$] $[_{VP}$ ekki $[_{VP}$ e$_i$ $[_V$ e$_j$]
　　　　that 　*Jon* 　　　*bought* 　　*not*

bókina]]]] 　　　　　　　　　　　　　　　　　　　　　(Ice)
book. DEF

(19) $[_{CP} [_{C[+F]}$ att] $[_{IP}$ Ulf$_i$ $[_{I[+T]}$] $[_{VP}$ inte $[_{VP}$ e$_i$ $[_V$ köpte]
　　　　that 　*Ulf* 　　　　*not* 　　　*bought*

boken]]]] 　　　　　　　　　　　　　　　　　　　　　(Swe)
book. DEF

Cinque (1999) also proposes a head movement account for the relative order of verbs and adverbs. He has shown that adverbs seem to follow a universal hierarchy. This universal order of functional elements is found both in languages with independent adverbs as well as in languages with aspectual suffixes. Thus he assumes that adverbs have fixed positions, determined by syntactic selection (c-selection) of functional projections. Every adverb is in the specifier position of its own functional projection. The hierarchy is illustrated in (20).

(20) $[_{Mood\ Speech-act}$ frankly $[_{Mood\ Evaluative}$ fortunately $[_{Mood\ Evidential}$ allegedly $[_{Mod\ Epistemic}$ probably $[_{T\ past}$ once $[_{T\ future}$ then $[_{Mod\ Irrealis}$ perhaps $[_{Mod\ Necessity}$ necessarily $[_{Mod\ Possibility}$ possibly $[_{Asp\ Habitual}$ usually $[_{Asp\ Repetitive}$ again $[_{Asp\ Freq\ (I)}$ often $[_{Asp\ Volitional}$ intentionally $[_{Asp\ Celerative\ (I)}$ quickly $[_{Asp\ Anterior}$ already $[_{Asp\ Terminative}$ no longer $[_{Asp\ Continuative}$ still $[_{Asp\ Perfect\ (?)}$ always $[_{Asp\ Retrospective}$ just $[_{Asp\ Proximative}$ soon $[_{Asp\ Durative}$ briefly $[_{Asp\ Generic/Progressive}$ characteristically(?) $[_{Asp\ Prospective}$ almost

[$_{Asp\ Sg.Completive\ (I)}$ completely [$_{Asp\ Pl.Completive}$ tutto [$_{Voice}$ well [$_{Asp\ Celerative\ (II)}$ fast/early [$_{Asp\ Repetetive\ (II)}$ again [$_{Asp\ Freq\ (II)}$ often [$_{Asp\ Completive\ (II)}$ completely]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]

For every Adv projection there is a head position, and the verb may move upwards in the structure through these functional heads. Crosslinguistic differences with respect to the relative order of a verb and a given adverb would then depend on how high up the verb has moved. Concerning the NN data this approach can account for the fact that the finite verb may precede most adverbs in subordinate contexts. Assuming that the adverbs are in the specifier position and each have a head position which is a potential landing site for the verb, the following NN options are predicted:

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

However, Bobaljik (1999), Ernst (2005), and Svenonius (2002) have all pointed out a potential problem with this analysis. In e.g. Italian both the auxiliary and the participle may occur either preceding or following an adverb such as *mica* 'not'. As both verbs can follow the adverb, Cinque would assume that they are both base generated below the adverb. Thus, the order Aux–V$_{Part}$–Adv is the result of both the auxiliary and the participle moving past the adverb. This leads to a violation of the Head Movement Constraint (HMC), as the participle *mangiato* 'eaten' will have to move past the trace of the auxiliary *hanno* 'they have'. ((22) is based on Bobaljik 1999:27.)

(22) [non hanno   [$_{FP}$ mangiato [$_{micaP}$ mica t$_{AUX}$ t$_{PART}$ [$_{piuP}$ più   t$_{PART}$
      NEG *they-have   eaten   not   any.longer*
      [$_{VP}$ t$_{PART}$]]]]]   (It)
      'They have not eaten any longer.'

NN examples like (14) and (15) above pose a similar problem, as more than one verb precede the adverb *som oftest* 'usually'. Like the Italian example in (22), under this approach the NN example leads to a violation of the Head Movement Constraint as the traces of the two verbal elements are crossing each other (only relevant projections included):

(23) [. . . hadde$_i$ kunnet$_j$ [$_{AspFreq(I)}$ som oftest   [t$_i$ t$_j$ bli lurt   med inn
         had   could   as often.est   be cheated with in
      likevel]]]
      anyway

For a head movement account like the one proposed by Cinque (1999) to work, one would assume that some adverbs can appear in several positions in order to avoid HMC violations. And indeed, Cinque (2004) does suggest that some adverbs may occur in (at least) two positions. He proposes that this is the case in examples like (24) below, where the adverbs *frequently* and *suddenly* at first glance seem to be freely ordered with respect to each other ((24) is from Ernst 2002:120).

(24)　　a.　She frequently was suddenly rejected by publishers.
　　　　b.　She suddenly was frequently rejected by publishers.

According to Cinque (2004), 'frequentative' adverbs like *frequently* appear in two distinct projections, one above adverbs such as *suddenly* and one below. Additional evidence for this comes from the fact that in some cases, the 'same' adverb may occur twice in the same sentence ((25) is taken from Cinque 1999:92):

(25)　　Gianni, saggiamente, *spesso* esce con la stessa persona *spesso*.
　　　　'G., wisely, often dates the same person often'.

Similarly, Cinque (2004) also accounts for the fact that the adverb *foolishly* may surface in several positions in (26) (from Svenonius 2002:210) by postulating two distinct positions for this adverb.

(26)　　a.　Foolishly Howard may have been trying to impress you.
　　　　b.　Howard foolishly may have been trying to impress you.
　　　　c.　Howard may foolishly have been trying to impress you.
　　　　d.　Howard may have foolishly been trying to impress you.
　　　　e.　Howard may have been foolishly trying to impress you.

For (26a) and (26b) Cinque (2004) suggests that *foolishly* has moved from an IP-internal position to the specifier of a Modifier Phrase in the CP field (cf. Rizzi 2002). In (26b) the subject *Howard* has moved across the adverb, resulting in the order *Howard > foolishly*. In (26c)–(26d), on the other hand the adverb remains in one out of the two possible merge positions in the IP field (from Cinque 2004:706):

(27)　　. . . <foolishly> may have <foolishly> been trying . . .

The modal *may* can remain to the left of the higher occurrence of *foolishly*, or move across it. In the latter case, the result is (26c). Similarly, the auxiliary *been* can remain to the left of the lower occurrence of *foolishly*, as in (26d), or move across it, as in (26e). Thus, assuming two separate positions for adverbs such as *foolishly*, all the different orders in (26) can be derived without violating the HMC.

However, to account for all the available orders of verbs relative to adverbs found in NN one would have to assume that many adverbs have (at least) two possible merge

positions. This is the case for adverbs such as *helt* 'completely', which on the surface may occur in five different positions:

(28)   ... ettersom det (**helt**)   måtte (**helt**)   kunne (**helt**)   ha
           ... *as*   *it*   *completely must*   *completely could*   *completely have*
           (**helt**)   blitt (**helt**)   ordnet.
           completely been   *completely fixed*

To account for all these five potential surface positions for *helt* 'completely' within Cinque's system outlined above, one would assume that this adverb can occur in (at least) two different positions. Taking the topmost position to be the specifier of a Modifier Phrase in the CP field, the other four positions can be explained by assuming two base positions for the adverb, and some verb movement:

(29)   ... måtte <helt> kunne ha <helt> blitt ordnet...

The various orders in (28) can be accounted for along the same lines as the examples in (26). The modal *kunne* 'could' may remain to the left of the higher occurrence of the adverb *helt* 'completely', or move across it. The passive auxiliary *blitt* 'been' may likewise remain to the left of the lower occurrence of the adverb, or it may move across it.

However, the two positions of the adverb do not correspond to differences in meaning in (28), so it is not obvious why this adverb should have two separate positions in Cinque's hierarchy. In fact, this account of the various surface orders makes Cinque's approach in many ways similar to the multiple adjunction points approach advocated by Ernst (2002) and Svenonius (2002) (this approach will be discussed in more detail in the next section).

Thus, it seems that the head movement account in its present state still has some explanatory shortcomings. It also runs into some serious problems when faced with the NN data. I therefore now move on to the two other approaches to clausal structure and movement introduced in section 1.

4. MULTIPLE ADJUNCTION POINTS FOR ADVERBS

Ernst (2002) and Svenonius (2002) suggest a different account for the order of verbs and adverbs. They take adverbs to be adjuncts rather than specifiers. The internal order of adverbs is determined by semantic selection (s-selection), rather than c-selection as assumed by Cinque (1999). According to Ernst (2002), a hierarchy of Fact-Event objects (FEO) determines the order in which adverbs are adjoined. Similarly, Svenonius argues that the internal order of e.g. *evidently* and *probably* can be accounted for in terms of what kinds of objects they modify (Svenonius 2002:213):

(30)   a.   Al evidently will probably give up.
          b.   *Al probably will evidently give up.

Svenonius suggests that *probably* modifies a Proposition, and also creates a Proposition when it is adjoined. Further, *evidently* modifies a Proposition as well, but the result of adjoining this adverb is a Fact (in terms of Vendler 1967). Accordingly, *evidently* can modify something already modified by *probably*, as this is a Proposition. Thus, *evidently* may precede *probably*. However, assuming that *probably* cannot modify a Fact, it cannot modify something that is already modified by *evidently*, and hence the order *probably > evidently* is ruled out. Thus, this approach can account for the transitivity violations pointed out in Nilsen (2003) with respect to internal adverb orders found in e.g. Norwegian. In Norwegian, the triplet of adverbs *muligens* 'possibly', *ikke* 'not', and *alltid* 'always' may occur in the following orders: *muligens > ikke*, *ikke > alltid*. However, *muligens* does not have to precede *alltid*; it can either precede or follow it.

Both Ernst (2002) and Svenonius (2002) argue that adverbs can be adjoined to several verbal projections. The 'loose fit' approach of Ernst (2002) allows adverbs to adjoin to any projection as long as their semantic requirements are met, i.e. as long as they follow the hierarchy of FEO. In short, this means that different types of adverbs may modify different types of objects (Events, Propositions, or Facts), and this determines where a given adverb can be adjoined. In a similar fashion, Svenonius argues that adverbs may adjoin to either VP or TP.

How does this approach fare with the data from Norwegian? Recall from section 2 that in StN the only possible position for the adverb(s) is preceding all the verbs. This is also always an option in NN. Thus, any adverb may always precede any finite verb, regardless of the kind of adverb and the kind of finite verb involved. Modified versions of (12a)–(12d) are given as (31a)–(31d) below:

(31)   a.   . . . ettersom ho **så ofte** kjøper dyre   designerklær.
             . . . *as   she so often buys   expensive designer-clothes*
             '. . . as she so often buys expensive designer clothes.'

       b.   . . . ettersom ho **allerede** har kjøpt tre   par denna uka.
             . . . *as   she already has bought three pairs this   week.the*
             '. . . as she has already bought three pairs this week.'

       c.   . . . ettersom han **som oftest**   kunne reparere sånt.
             . . . *as   he   as often.est could fix   such*
             '. . . as he could usually fix such things.'

       d.   . . . ettersom det **alltid**   blei dekt før   æ sto   opp.
             . . . *as   it always was set before I stood up*
   '. . . as it was always set by the time I got up.'

A 'multiple positions' approach could account for this by assuming that adverbs in this position in StN and NN are adjoined to a functional projection (FP) in which the finite verb is located in embedded clauses (perhaps a projection carrying tense):

(32) a. [_FP_ så ofte [_FP_ kjøper. . .]]
      b. [_FP_ allerede [_FP_ har kjøpt. . .]]
      c. [_FP_ som oftest [_FP_ kunne reparere. . .]]
      d. [_FP_ alltid [_FP_ blei dekt. . .]]

Now, what about the other options in NN? Recall from examples (12a)–(12d) in section 2 that finite verbs generally may precede adverbs such as e.g. *så ofte* 'so often', *allerede* 'already', *som oftest* 'usually', and *alltid* 'always'. The relevant parts of (12a)–(12d) are repeated as (33a)–(33d).

(33) a. . . . ettersom ho kjøper **så ofte** dyre   designerklær.
          . . . *as*   *she buys   so often expensive designer-clothes*
          '. . . as she so often buys expensive designer clothes.'
      b. . . . ettersom ho har **allerede** kjøpt   tre   par   denna uka.
          . . . *as*   *she has already bought three pairs this   week.the*
          '. . . as she has already bought three pairs this week.'
      c. . . . ettersom han kunne **som oftest**   reparere sånt.
          . . . *as*   *he could as often.est fix   such*
          '. . . as he could usually fix such things.'
      d. . . . ettersom det blei **alltid**   dekt før   æ sto   opp.
          . . . *as*   *it was always set   before I stood up*
   '. . . as it was always set by the time I got up.'

This can be accounted for in a 'multiple positions' approach by allowing adverbs to also be adjoined below FP. It is then also assumed that the finite verb moves to a functional head F in NN subordinate clauses (which is not an uncontroversial assumption). The order of the finite verb and the adverb in NN will depend on whether the adverb is adjoined above or below FP. It thus appears that the F head is irrelevant for adjunction of these kinds of adverbs in NN; the adverbs can adjoin either above or below it. In StN, on the contrary, this F head presumably is not irrelevant for adjunction, and adverbs can only be adjoined above it. The structures for (33b) and (33c) are shown in (34).

(34)
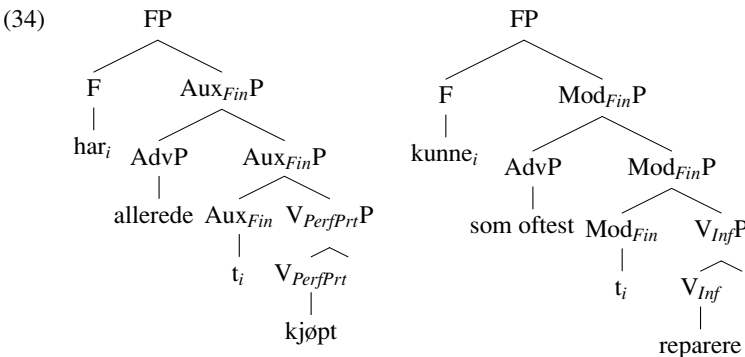
However, neither of the adjunction points above and below FP can account for the fact that certain non-finite auxiliaries may precede adverbs in NN. This was illustrated in (14) and (15) in section 2. Here are some other examples following the same pattern:

(35)   Vi begynte å bli spent   nu   ettersom vi ville   kunne **allerede** vite
       we began   to be excited now as   we would could already know
       resultatet på fredag.
       result.the on Friday
       'We started getting excited now as we would be able to know the result already on Friday.'

(36)   Det er få   som planlegger å se   denna filmen på kino   ettersom
       there are few who plan   to watch this   film.the on cinema as
       mange har   kunnet **allerede** lasta   den ned   til sin   egen datamaskin.
       many have could   already loaded it   down to their own computer
       'Few people plan to go to the cinema to watch this film as many people have already been able to download it to their own computer.'
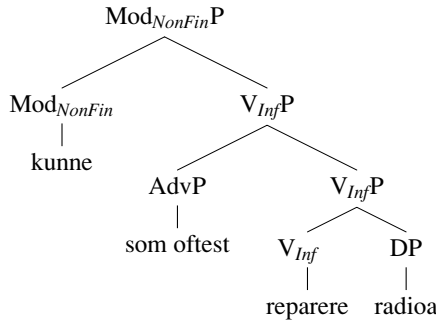
To account for this, a 'multiple position' approach could postulate an additional adjunction position for adverbs below non-finite modals. This is illustrated for (36) in the tree below:

(37)
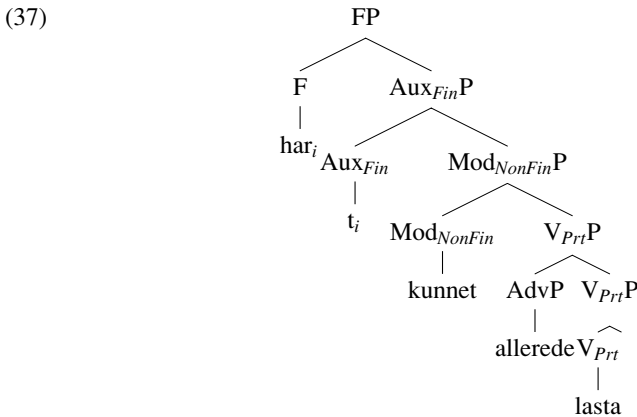
This is presumably also the adjunction point for adverbs in the NN examples like (13), where the infinitive in a small clause precedes the adverb ((13) is repeated here as (38)). Only the relevant parts of the tree are included:

(38)   Han Hårek mente   å kunne **som oftest**   reparere radioa.
       he   Hårek thought to could as   often.est fix   radios
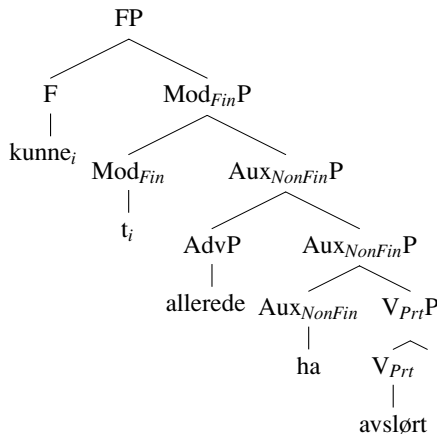   'Hårek considered himself usually able to fix radios.'

(39)

```
                          Mod_NonFin P
                     ┌────────┴────────────┐
              Mod_NonFin               V_Inf P
                 │                 ┌──────┴──────┐
              kunne            AdvP           V_Inf P
                                │          ┌────┴────┐
                             som oftest  V_Inf      DP
                                          │          │
                                      reparere     radioa
```

As we recall, the non-finite perfective auxiliary *ha* 'have' cannot precede the adverb in examples like (16) in section 2 and (40) below. This is presumably so because this auxiliary is generated below the adjunction point for adverbs such as *allerede* 'already'. The tree in (41) shows the only possible order of such adverbs and the non-finite perfective auxiliary.
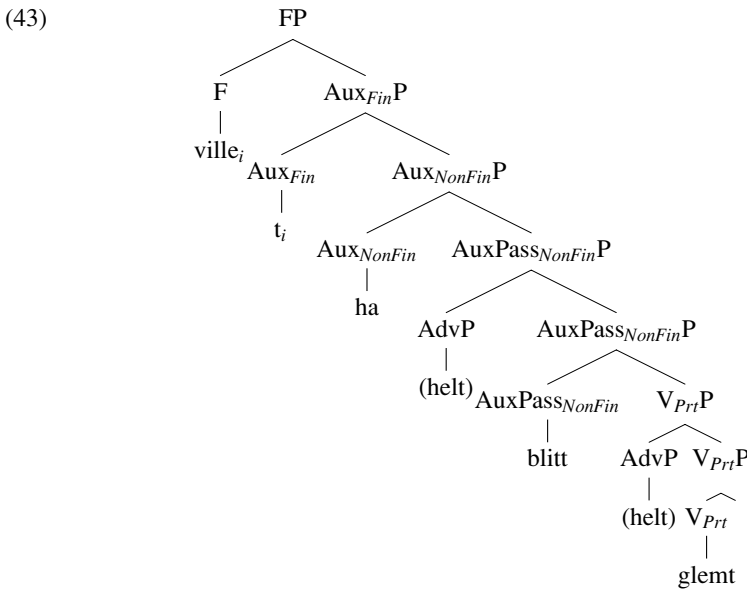
(40)   *Vi fant   det best å gå i   skjul   ettersom politiet   kunne ha
       we found it   best to go into hiding as   police.the could have
       allerede avslørt   oss for alt vi visste.
       already   revealed us   for all we knew
       'We found it best to go into hiding as the police could have found out about us already for all we knew.'

(41)

```
                              FP
                   ┌──────────┴──────────┐
                   F                  Mod_Fin P
                   │            ┌──────────┴──────────┐
                kunne_i       Mod_Fin            Aux_NonFin P
                                │           ┌─────────┴─────────┐
                               t_i        AdvP            Aux_NonFin P
                                           │          ┌─────────┴─────────┐
                                        allerede  Aux_NonFin          V_Prt P
                                                      │                   │
                                                     ha                 V_Prt
                                                                          │
                                                                       avslørt
```

As might be expected, adverbs which according to Cinque's hierarchy are lower that 'usually' and 'already', like *helt* 'completely' and *igjen* 'again' may in addition be adjoined to an even lower adjunction point in NN. The fact that such adverbs may follow both the non-finite perfective auxiliary and the non-finite passive auxiliary, suggests that they may be adjoined below either of these non-finite auxiliaries. This is illustrated in (43).

(42) Det var bra at vi minte dem på om konserten...
it was good that we reminded them on about concert.the
'It was a good thing that we reminded them about the concert...'

   a. ... ettersom de ville ha (**helt**) glemt den ellers.
     ... as they would have completely forgotten it otherwise
    '... as they would have completely forgotten it otherwise.'

   b. ... ettersom den ville ha (**helt**) blitt (**helt**) glemt
     ... as it would ha completely been completely forgotten
    ellers.
    otherwise
    '... as it would have completely been forgotten otherwise.'

(43)

```
                        FP
                       /  \
                      F    Aux_Fin P
                      |    /       \
                   ville_i  Aux_Fin  Aux_NonFin P
                           |        /          \
                          t_i   Aux_NonFin   AuxPass_NonFin P
                                 |           /          \
                                ha        AdvP       AuxPass_NonFin P
                                          |          /          \
                                        (helt)  AuxPass_NonFin   V_Prt P
                                                  |            /    \
                                                blitt      AdvP    V_Prt P
                                                           |         |
                                                         (helt)    V_Prt
                                                                    |
                                                                  glemt
```

On the other hand, adverbs which are assumed to be higher in the hierarchy are restricted to the higher adjunction positions in NN. This is the case for *alltid* 'always' (although 'always' is actually positioned lower than 'usually' and 'already' in Cinque's hierarchy), as well as even higher (speaker-oriented) adverbs such as *heldigvis* 'fortunately'.

(44) ?? Det gjorde ikke nå at han ikke var blitt bedt på festen
     it did not anything that he not was been invited on party.the
   ettersom han hadde kunnet **alltid/heldigvis** bli lurt med inn likevel.
   as he had could always/fortunately be cheated with in anyway
   'It didn't matter that he had not been invited to the party as it always/fortunately had been possible to sneak him in anyway.'

The fact that high adverbs like *heldigvis* 'fortunately' are only marginally accepted following non-finite modal auxiliaries suggests that such adverbs may only adjoin above or below the FP that finite verbs move to, and are prohibited in the adjunction point below non-finite modals.

Summing up the account of the NN data so far, the generalisations seem to be that NN adverbs like e.g. *som oftest* 'usually' and *allerede* 'already' can adjoin above or below the FP that the finite verb moves to in NN, or below non-finite modals, but the adjunction points lower down in the structure are not available to such adverb. Lower adverbs such as *helt* 'completely' may apparently be adjoined lower down, below non-finite perfective auxiliaries and non-finite passive auxiliaries. Finally, high adverbs such as *heldigvis* 'fortunately' seem to be restricted to the adjunction points above and below FP in NN. According to this, the NN embedded clause with its various adjunction points for adverbs will look something like (45). In the tree, AdvP3 corresponds to adverbs such as *helt* 'completely', AdvP2 corresponds to adverbs such as *som oftest* 'usually' and *allerede* 'already', and AdvP1 corresponds to adverbs such as *heldigvis* 'fortunately'. Note however that these adjunction points will refer to the lowest possible adjunction point for each class of adverbs. Any adverb in NN may optionally be adjoined to adjunction points above its lowest adjunction point:

(45)
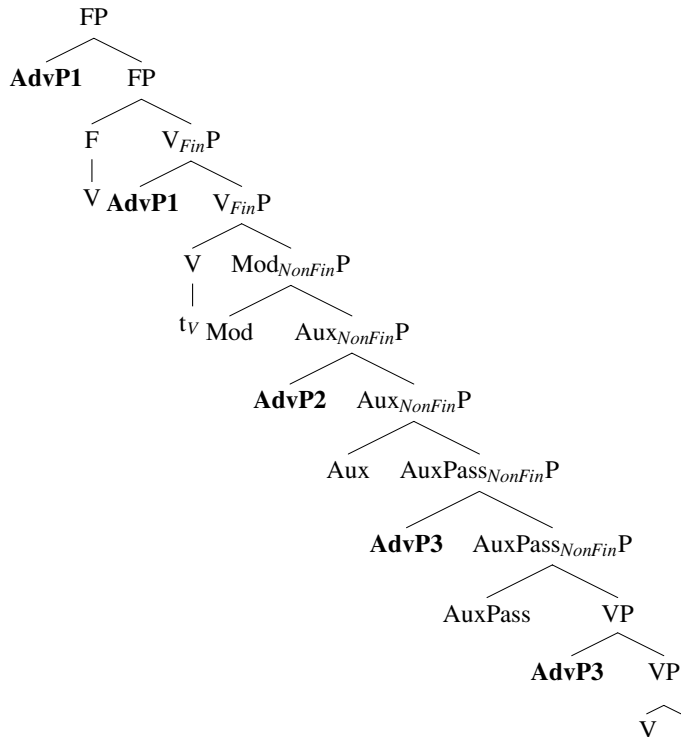
Up to now, we have only looked at sentences with one adverb. How would this account deal with cases of multiple adverbs, as in (46)?
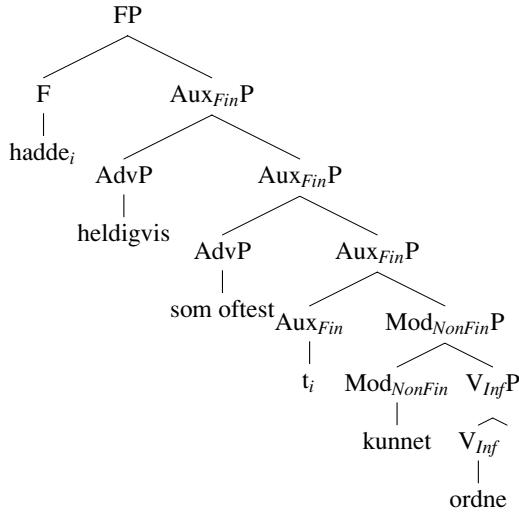
(46)   a.   ... ettersom han hadde **heldigvis** kunnet **som oftest** ordne det.
            ... *as   he had fortunately could as often.est fix   it*
            '... as he fortunately had usually been able to fix it.'
    b.   ... ettersom han hadde kunnet **som oftest** **helt** ordne det.
            ... *as   he had could as often.est completely fix   it*
            '... as he had usually been able to fix it completely.'
    c.   ... ettersom han hadde **heldigvis** **som oftest** kunnet ordne det.
            ... *as   he had fortunately as often.est could fix   it*
            '... as he fortunately had usually been able to fix it.'

For (46a) one could assume that each of the two adverbs are adjoined in separate positions. The higher adverb *heldigvis* 'fortunately' is adjoined below FP, whereas *som oftest* 'usually' is adjoined below the non-finite modal, as shown in (47).

(47)
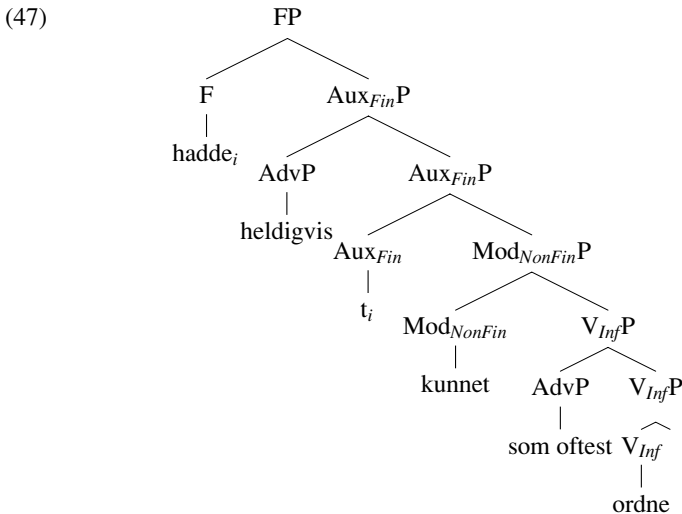
In (46b) and (46c), however, both adverbs appear to be adjoined at the same adjunction point. In (46b) both the adverbs *som oftest* 'usually' and *helt* 'completely' are adjoined below the non-finite modal, whereas in (46c), both the adverbs *heldigvis* 'fortunately' and *som oftest* 'usually' are adjoined below FP. The structure for (46c) is given in (48).

(48)

```
                            FP
                   ┌─────────┴─────────┐
                   F               Aux_FinP
                   │            ┌──────┴──────┐
                 hadde_i      AdvP        Aux_FinP
                               │        ┌─────┴──────┐
                           heldigvis  AdvP       Aux_FinP
                                       │      ┌──────┴──────┐
                                   som oftest Aux_Fin   Mod_NonFinP
                                              │      ┌──────┴──────┐
                                             t_i  Mod_NonFin   V_InfP
                                                     │         ┌──┴──┐
                                                   kunnet     V_Inf
                                                               │
                                                             ordne
```

Here the question arises of how to order the two adverbs. As both adverbs obviously can modify the same projection in each of these two examples (i.e. the $V_{Inf}P$ in (46b) and the $Aux_{Fin}P$ in (46c)), a 'multiple positions' account would assume that the internal order of the adverbs is determined by what kinds of objects result from modification. Presumably, the object resulting from modification by 'usually' in (46c) can be modified further by 'fortunately', whereas the object resulting from modification by 'fortunately' cannot be modified further by 'usually'.

A 'multiple positions' account thus seems to be able to account for much of the NN data. By assuming various adjunction points for adverbs in NN, combined with movement of the finite verb, the NN patterns reported on here are all covered for. There seem to be restrictions on where different classes of adverbs are allowed to be adjoined. Whereas low adverbs such as *helt* 'completely' and *igjen* 'again' apparently are allowed at all adjunction points, the mid adverbs *som oftest* 'usually' and *allerede* 'already' are restricted to the middle and highest adjunction points. Even higher adverbs such as *heldigvis* 'fortunately' seem to only be allowed at the two highest adjunction points in NN. In StN, only adjunction above FP is available for any kind of adverb.

However, there are some remaining questions. First, what restricts how high an adverb can be adjoined? This might well be related to scope, such that e.g. high adverbs such as *heldigvis* 'fortunately' cannot be in the scope of non-finite auxiliaries, and hence cannot be adjoined below them. This would be a welcome result for the approach suggested by Ernst and Svenonius, as they assume that the adjunction points for adverbs are determined by the semantic properties of the object the adverb

modifies. However, assuming multiple adjunction points, it also follows that very low adverbs such as *helt* 'completely' can be adjoined very high (in fact, they have to be adjoined in the highest position in StN). These adverbs apparently modify the same object regardless of where they are adjoined, which would not be expected under this approach.

This is related to another problematic issue for a 'multiple positions' account, namely how to deal with the contrast between StN and NN. Again, the question arises as to how an adverb adjoined in the highest position in StN can modify an object in the same way as an adverb adjoined lower down (and closer to the object it modifies) in NN. If adverbs in these two varieties of Norwegian indeed do modify their objects in the same way, regardless of where they are adjoined, this account might assume that some of the intervening projections are irrelevant for modification. Thus, an adverb adjoined in a high position may in fact modify something lower down, without modifying the intervening projections.

Hence, although both StN and NN independently can be accounted for within this approach, there are some problematic questions concerning how scope is related to adjunction both with respect to the analysis of NN, and with respect to the contrast between StN and NN. So, turning to section 5, the question is, does a remnant movement account fare better with the data at hand?

5. REMNANT MOVEMENT

Nilsen (2003) has proposed a remnant movement approach to account for verb – adverb orders in StN. Like Ernst and Svenonius he assumes that different types of adverbs modify different types of objects. However, like Cinque (1999), Nilsen (2003) argues for a strict merge position for each adverb. He suggests that the internal order of adverbs is semantically conditioned, and the relative underlying order between verbs and adverbs is strictly related to scope. Thus, rather than having all adverbs merge with either VP or TP, he suggests that each adverb is merged immediately above the verbal projection it takes scope over. In clauses with multiple verbs and adverbs the order of merge will be Adv–V–Adv–V–Adv–V, etc., rather than Adv–Adv–Adv–V–V–V, where all the adverbs precede the verbs. When several adverbs precede or follow one or more verbs, Nilsen analyses this as a result of remnant movement (cf. Hinterhölzl 1997, 1999; Koopman & Szabolcsi 2000), rather than head movement. According to his approach, there are crossing scope dependencies between the verbs and the adverbs in the StN clause in (6), repeated here as (49a). The merging order is as shown in (49b) (Nilsen 2003:72).

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

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

Nilsen (2003) argues that (49a) can be derived (from the merging order shown in (49b)) by scope-based merge and a number of remnant movements. Assuming that the order in which adverbs and verbs are merged is determined by scope relations, and that adverbs attract the closest verbal projection, and verbs attract the closest adverb projection, Nilsen (2003:73) gives the following derivation for (49a):

Derivation 1:

[completely [fixed]]

                                                    MOVE VP

[fixed [completely]]

                                                    MERGE *been*

[been [fixed [completely]]]

                                                    MOVE AdvP

[completely [been [fixed]]]

                                                    MERGE *always*

[always [completely [been [fixed]]]]

                                                    MOVE VP

[[been [fixed]] [always [completely]]]

                                                    MERGE *have*

[have [[been [fixed]] [always [completely]]]]

                                                    MOVE AdvP

[[always [completely]] [have [been [fixed]]]]

                                                    MERGE *any.longer*

[any.longer [[always [completely]] [have [been [fixed]]]]]

                                                    MOVE VP

[[have [been [fixed]]] [any.longer [always [completely]]]]

                                                    MERGE *could*

[could [[have [been [fixed]]] [any.longer [always [completely]]]]]

                                                    MOVE AdvP

[[any.longer [always [completely]]] [could [have [been [fixed]]]]]

                                                    MERGE *not*

[not [[any.longer [always [completely]]] [could [have [been [fixed]]]]]]

Reformulating Nilsen's (2003) generalisations somewhat, we might say that *below* every auxiliary there is a functional projection lifting up the closest verbal projection. Let us call this functional projection a VP lifter. In addition, *above* every

auxiliary, there is a functional projection lifting the closest adverb projection. Let us call this projection an AdvP lifter. This can be stated as Generalisation 1:

Generalisation 1
Every auxiliary has a VP lifter below it and an AdvP lifter above it.

How would the patterns found in NN be derived within this system? As in StN, NN always allows adverb(s) to precede all verbs. This was shown in e.g. example (31c) above (repeated here as (50)).

(50)   . . . ettersom han **som oftest**   kunne reparere sånt.
        . . . *as   he   as   often.est could fix   such*
        '. . . as he could usually fix such things.'

Such examples indicate that Generalisation 1 may also hold in NN. The simpler sentence in (31c) can be derived in the same way as the more complex sentence in (49a), with a VP lifter below and an AdvP lifter above every auxiliary (here and in the following derivations auxiliaries and their lifters are marked in bold face).

Derivation 2 (= (50))
[reparere]
                              MERGE Adv
[som oftest [reparere]]
                              LIFT VP
[reparere [som oftest]]
                              MERGE V
[kunne [reparere [som oftest]]]
                              LIFT AdvP
[som oftest [kunne [reparere]]]

Turning to the word orders specific for NN, we recall that NN also generally allows finite verbs to precede adverbs, as in (12c) (repeated here as (51)) and (52).

(51)   . . . ettersom han kunne **som oftest**   reparere sånt.
        . . . *as   he   could as   often.est fix   such*
        '. . . as he could usually fix such things.'

(52)   . . . ettersom mange har **allerede** kunnet lasta   den ned   til sin   egen
        . . . *as   many have already could loaded it   down to their own*
        datamaskin.
        computer
        '. . . as many people have already been able to download it to their own computer.'

This word order can be derived by assuming that Generalisation 1 may be optional in NN. In both Derivations 3 and 4 the finite auxiliary lacks the pair of lifters above and below it. However, as we see in Derivation 4, the non-finite auxiliary still has both lifters:

Derivation 3 (= (51))
[reparere]

                                    MERGE Adv

[som oftest [reparere]]

                                    MERGE V

[kunne [som oftest [reparere]]]

Derivation 4 (= (52))
[lasta]

                                    MERGE Adv

[allerede [lasta]]

                                    LIFT VP

[lasta [allerede]]

                                    MERGE V

[kunnet [lasta [allerede]]]

                                    LIFT AdvP

[allerede [kunnet [lasta]]]

                                    MERGE V

[har [allerede [kunnet [lasta]]]]

The lack of a VP lifter below and an AdvP lifter above the finite auxiliary prevents the adverb(s) from preceding this auxiliary. However, as the non-finite auxiliary still has its lifters in (52), the adverb ends up preceding this auxiliary in Derivation 4.

The next word order allowed in NN are the cases where non-finite modal auxiliaries precede certain adverbs in sentences like (36) (repeated here as (53)) and (54).

(53)　　. . . ettersom mange hadde kunnet **allerede** lasta　den ned　til sin　egen
　　　　. . . *as　　　many　have　could　already　loaded　it　down　to their　own*
　　　　datamaskin.
　　　　computer
　　　　'. . . as many people have already been able to download it to their own computer.'

(54)　　. . . ettersom han hadde kunnet **som oftest**　bli lurt　　med inn likevel.
　　　　. . . *as　　　he had　　could　as　often.est be cheated with in　anyway*
　　　　'. . . as it had most of the time been possible to sneak him in anyway.'

To arrive at this word order, both the finite and the non-finite auxiliaries lack the lifters above and below them, preventing the adverb from preceding them. In fact, what we get in both Derivations 5 and 6 below is the actual order of merge.

Derivation 5 (= (53))

[lasta]

<div style="text-align:center">MERGE Adv</div>

[allerede [lasta]]

<div style="text-align:center">MERGE V</div>

[kunnet [allerede [lasta]]]

<div style="text-align:center">MERGE V</div>

[hadde [kunnet [allerede [lasta]]]]

Derivation 6 (= (54))

[lurt]

<div style="text-align:center">MERGE V</div>

[bli [lurt]]

<div style="text-align:center">MERGE Adv</div>

[som oftest [bli [lurt]]]

<div style="text-align:center">MERGE V</div>

[kunnet [som oftest [bli [lurt]]]]

<div style="text-align:center">MERGE V</div>

[hadde [kunnet [som oftest [bli [lurt]]]]]

Infinitives of small clauses preceding an adverb will follow the same pattern as in Derivations 5 and 6:

(55) Han Hårek mente å kunne **som oftest**   reparere radioa.
      he Hårek thought to could as   often.est fix   radios
      'Hårek considered himself usually able to fix radios.'

Derivation 7 (= (55))

[reparere]

<div style="text-align:center">MERGE Adv</div>

[som oftest [reparere]]

<div style="text-align:center">MERGE V</div>

[kunne [som oftest [reparere]]]

Higher adverbs such as *heldigvis* were only marginally accepted in the position following the non-finite modals:

(56) ??. . . ettersom han hadde kunnet **heldigvis** bli   lurt   med inn
      . . . as   he had   could fortunately become cheated with in
      likevel.
      anyway
      '. . . as it fortunately had been possible to sneak him in anyway.'

This, however, is not unexpected. Presumably, such higher adverbs are merged above the non-finite modal. As the finite auxiliary lacks the lifters below and above it, the resulting order corresponds to the order of merge:

Derivation 8 (= grammatical version of (56))
[lurt]
           MERGE V
[bli [lurt]]
           MERGE V
[kunnet [bli [lurt]]]
           MERGE Adv
[heldigvis [kunnet [bli [lurt]]]]
           MERGE V
[hadde [heldigvis [kunnet [bli [lurt]]]]]

As pointed out in section 2, the non-finite perfective auxiliary *ha* 'have' cannot precede adverbs such as *allerede* 'already' and *som oftest* 'usually'. This was illustrated in (16) (repeated as (57)).

(57) *... ettersom man måtte ha **som oftest** lest hele pensum for å
    ... *as*   *one must have as* *often.est read whole syllabus for to*
    bestå eksamen.
    pass exam
    '... as one most of the time had to have read the whole syllabus in order to pass the exam.'

As in the case of (56), this is not a problem if we assume that non-finite perfective auxiliaries are merged below the mentioned adverbs. Again, the finite auxiliary lacks the lifters above and below it:

Derivation 9 (= grammatical version of (57))
[lest]
         MERGE V
[ha [lest]]
         MERGE Adv
[som oftest [ha [lest]]]
         MERGE V
[måtte [som oftest [ha [lest]]]]

However, as would be expected, lower adverbs such as *helt* 'completely' and *igjen* 'again' may follow the non-finite perfective auxiliary, as these adverbs presumably are merged below this auxiliary (the relevant parts of (42b) are repeated here as (58)).

(58)   . . . ettersom den ville ha **helt**   blitt glemt   ellers.
            . . . as   it   would ha completely been forgotten otherwise
          '. . . as it would have completely been forgotten otherwise.'

Derivation 10 (= (58))
[glemt]
                           MERGE Adv
[helt [glemt]]
                           LIFT VP
[glemt [helt]]
                           MERGE V
[blitt [glemt [helt]]]
                           LIFT AdvP
[helt [blitt [glemt]]]
                           MERGE V
[ha [helt [blitt [glemt]]]]
                           MERGE V
[ville [ha [helt [blitt [glemt]]]]]

In Derivation 10, the adverb *helt* 'completely' is merged below even the passive auxiliary, but as this auxiliary has the pair of lifters below and above it, the adverb ends up preceding it. However, neither the non-finite perfective auxiliary nor the finite modal have the lifters below and above them, resulting in the adverb following both of them.

Finally, these lower adverbs may also follow non-finite passive auxiliaries in NN, as in (42b) (the relevant parts are repeated here as (59)).

(59)   . . . ettersom den ville ha blitt **helt**   glemt   ellers.
            . . . as   it   would ha been completely forgotten otherwise
          '. . . as it would have completely been forgotten otherwise.'

This word order can be derived by assuming that also the non-finite passive auxiliary may optionally lack the lifters below and above it:

Derivation 11 (= (59))
[glemt]
                           MERGE Adv
[helt [glemt]]
                           MERGE V
[blitt [helt [glemt]]]
                           MERGE V
[ha [blitt [helt [glemt]]]]
                           MERGE V
[ville [ha [blitt [helt [glemt]]]]]

Summing up so far, the remnant movement account given for Norwegian here involves the following generalisation (which is a somewhat reformulated version of Nilsen's 2003 system):

Generalisation 1
Every auxiliary has a VP lifter below it and an AdvP lifter above it.

In StN, this generalisation holds obligatorily for all auxiliaries. This yields the order where all adverbs precede all verbs. In NN, on the other hand, Generalisation 1 may be optional for one or more of the auxiliaries. Whenever an auxiliary lacks the pair of lifters, it ends up preceding the adverbs it takes scope over. This option is available for both finite and non-finite auxiliaries. As we have seen from the above examples, the lifters may be lacking for one of the auxiliaries, but not the others within one and the same sentence. This was the case in e.g. example (52), where the finite auxiliary lacked the lifters, but the non-finite auxiliary had them, resulting in the finite auxiliary preceding the adverb, but the non-finite auxiliary following it (cf. Derivation 4).

The system still holds if there are both multiple verbs and multiple adverbs involved, as in (46c), here repeated as (60). Again, the finite verb, *hadde* 'had', which has the lifters below and above it, precedes the adverb it takes scope over, *heldigvis* 'fortunately'. However, the non-finite verb, *kunnet* 'could', lacking the lifters, follows the adverb it takes scope over, *som oftest* 'usually':

(60)   . . . ettersom han hadde **heldigvis   som oftest**   kunnet ordne det.
          . . . *as   he had   fortunately as   often.est could   fix   it*
          '. . . as he fortunately usually had been able to fix it.'

Derivation 12 (= (60))
[ordne]

MERGE Adv

[som oftest [ordne]]

LIFT VP

[ordne [som oftest]]

MERGE V

[kunnet [ordne [som oftest]]]

LIFT AdvP

[som oftest [kunnet [ordne]]]

MERGE Adv

[heldigvis [som oftest [kunnet [ordne]]]]

MERGE V

[hadde [heldigvis [som oftest [kunnet [ordne]]]]]

Reversively, the lifters may be lacking for one of the non-finite auxiliaries but be present for the finite auxiliary, the effect of which only is visible in sentences with multiple adverbs. The result, as illustrated in (61), is that the non-finite auxiliary

precedes the adverb it takes scope over, whereas the finite auxiliary follows the adverb it takes scope over.

(61)   ... ettersom han **heldigvis**   hadde kunnet **som oftest**   ordne det.
        ... *as   he fortunately had   could as often.est fix   it*
        '... as he fortunately usually had been able to fix it.'

Derivation 13 (= (61))
[ordne]

                                           MERGE Adv
[som oftest [ordne]]

                                           MERGE V
[kunnet [som oftest [ordne]]]

                                           MERGE Adv
[heldigvis [kunnet [som oftest [ordne]]]]

                                           LIFT VP
[[kunnet [som oftest [ordne]]] [heldigvis]]

                                           MERGE V
[hadde [kunnet [som oftest [ordne]]] [heldigvis]]

                                           LIFT AdvP
[heldigvis [hadde [kunnet [som oftest [ordne]]]]]

Finally, the lifters may be lacking in both the finite and the non-finite auxiliary, as in (62), in which case they both precede the adverb they take scope over.

(62)   ... ettersom han hadde **heldigvis**   kunnet **som oftest**   ordne det.
        ... *as   he had fortunately could as often.est fix   it*
        '... as he fortunately usually had been able to fix it.'

Derivation 14 (= (62))
[ordne]

                                           MERGE Adv
[som oftest [ordne]]

                                           MERGE V
[kunnet [som oftest [ordne]]]

                                           MERGE Adv
[heldigvis [kunnet [som oftest [ordne]]]]

                                           MERGE V
[hadde [heldigvis [kunnet [som oftest [ordne]]]]]

However, there are some remaining questions with respect to the remnant movement account as well. The NN examples discussed above all involve auxiliaries ending up in a position preceding an adverb that they take scope over, i.e. that it is merged above. But what about cases where a verb (main verb or auxiliary) ends up

preceding an adverb that takes scope over that verb? A few examples of this were given in section 2, such as (12a) and (12b) (here repeated as (63a) and (63b)). Another example is (64).

(63)   a.   ... ettersom ho kjøper **så ofte** dyre   designerklær.
            ... *as*   *she buys   so often expensive designer-clothes*
            '... as she so often buys expensive designer clothes.'
    b.   ... ettersom ho har **allerede** kjøpt tre   par denna uka.
            ... *as*   *she has already bought three pairs this   week.the*
            '... as she has already bought three pairs this week.'

(64)   ... ettersom han kunne **heldigvis** bli lurt   med inn likevel.
      ... *as*   *he could fortunately be cheated with in   anyway*
      '... as he fortunately could be sneaked in anyway.'

In all of these latter cases, the adverb is merged above the finite verb, but still this verb ends up preceding it. This cannot be derived simply by assuming that the finite verb lacks the VP lifter below it and the AdvP lifter above it, as in the previous cases of verbs preceding adverbs. As illustrated in the derivation below, a lack of lifters below and above the finite verb will not have any effect on the order of the verb and the adverb:

Derivation 15 (= unsuccessfull derivation of (64))
[lurt]
                      MERGE V
[bli [lurt]]
                      LIFT VP?
[bli [lurt]]
                      MERGE V
[kunne [bli [lurt]]]
                      LIFT AdvP?
[kunne [bli [lurt]]]
                      MERGE Adv
[heldigvis [kunne [bli [lurt]]]]

Thus, to account for this, we need an operation in NN which optionally moves the finite verb to a high position:

Generalisation 2
The finite verb optionally moves to a high position.

Note that this does not necessarily have to be the *highest* position, as in (65), where the finite verb precedes *allerede* 'already' but follows *heldigvis* 'fortunately' (where both adverbs are merged above *har* 'has').

(65) ... ettersom ho **heldigvis** har **allerede** kjøpt tre par denna
      ... *as*   *she fortunately has already bought three pairs this*
      uka.
      week.the
      '... as she has fortunately already bought three pairs this week.'

One possible analysis of the position of the finite verb is to assume that this verb moves to a higher position by head movement. If this is the case, it would allow the material within the projection of the finite verb to be stranded below the adverb:

Derivation 16 (= potential derivation of (64) I)
[lurt]
                              MERGE V
[bli [lurt]]
                              MERGE V
[kunne [bli [lurt]]]
                              MERGE Adv
[heldigvis [kunne [bli [lurt]]]]
                              HEAD MOVE V$_{Fin}$?
[kunne [heldigvis [bli [lurt]]]]

Alternatively, one might attempt to resolve this by remnant movements, for example by assuming that finite verbs have a lifter immediately above them lifting everything below it, a ∀ lifter, followed by a V$_{Fin}$P lifter above that again. This latter lifter must be indifferent to intervening projections as it crucially seems to apply above the adverb *heldigvis* 'fortunately' in the following derivation:

Derivation 17 (= potential derivation of (64) II)
[lurt]
                              MERGE V
[bli [lurt]]
                              MERGE V
[kunne [bli [lurt]]]
                              LIFT ∀?
[[bli [lurt]] [kunne]]
                              MERGE Adv
[heldigvis [bli [lurt [kunne]]]]
                              LIFT V$_{Fin}$P?
[kunne [heldigvis [bli [lurt]]]]

As mentioned above, non-finite auxiliaries also sometimes marginally may precede adverbs that take scope over them, as in (56). To the extent that such examples

are possible, they seem to involve the non-finite verb being moved/lifted above an outscoping adverb in a parallel way to what is generally accepted for finite verbs. Whatever analysis assumed for the possibility of finite verbs preceding outscoping adverbs (whether one of the two suggestions above, or some other mechanism), this might be applied to these marginal cases of non-finite verbs preceding outscoping adverbs as well.

It seems that a remnant movement approach à la Nilsen (2003), and with the modifications made here, can account for much of the NN data in quite an elegant way. Within this account, the various NN word orders are mostly assumed to depend on whether Generalisation 1 is obligatory or optional for the different auxiliaries, i.e. whether or not auxiliaries have the pair of a VP lifter below them and an AdvP lifter above them. However, the cases of finite verbs preceding adverbs that take scope over them required an additional generalisation, Generalisation 2, optionally moving the finite verb to a high position. The nature of this operation is not quite clear. Two possibilities were suggested above, one involving head movement of the finite verb, the other involving remnant movement. In either case, the operation getting the finite verb to this high position is distinct from the operation resulting in verbs preceding adverbs they take scope over. This seems an unattractive point in the otherwise systematic remnant movement account.

6. SUMMARY AND CONCLUDING REMARKS

In this paper, three approaches to clausal structure were discussed, specifically focussing on the order of verbs and adverbs in two varieties of Norwegian, Standard Norwegian (StN) and Northern Norwegian (NN). As was shown in section 2, NN allows many more possible word orders with respect to verbs and adverbs, than StN does.

In section 3, a head movement account à la Cinque (1999) was considered. Cinque (1999) suggests that there is a universal hierarchy of adverbs, and that each adverb sits in the specifier position of its own projection. Every projection has a head position which the verb potentially could move to, and languages may vary with respect to how high the verb may move. In NN, the finite verb in general may precede any adverb in subordinate clauses, and this could be accounted for within a head movement approach by allowing NN finite verbs to optionally move to a very high position. However, it was shown that some of the NN data pose challenges to this account in ways parallel to what has been pointed out for e.g. Italian by among others Bobaljik (1999). That is, NN has cases where several verbs may precede one or more adverbs. This will lead to Head Movement Constraint (HMC) violations, as at least one of the verbs apparently will move across the trace of some other verb. But, as pointed out by an anonymous reviewer, it might be premature to dismiss a head movement account solely on the basis of apparent HMC violations. It is of course

possible that the HMC in its current version should be modified, and that the NN data reported on here may conform to a head movement account assuming a revised version of the HMC.

Cinque (2004) suggests that some adverbs may occur in two separate positions, and that this might remedy the HMC problems in e.g. Italian. His analysis of the problematic Italian examples may be transfered to the parallel NN examples. But considering all the possible word order patterns in NN, it appears that quite a few NN adverbs need to have (at least) to separate positions. In addition, it is not obvious that these different positions always correspond to differences in the interpretation of the adverbs.

However, even if the apparent HMC violations are set aside, one would still need to account for the fact that the internal order of the verbs is fixed. Something like shape conservation (cf. Williams 2003) seems to be necessary to ensure that verbs keep their internal order when they are moved in NN.

It thus appears that a head movement account in its present version faces several challenges with respect to the NN data discussed here.

In section 4, a 'multiple positions' account was evaluated for the NN data. This account seems to fare somewhat better with the data from NN than a head movement account. Assuming that adverbs can adjoin in several positions, and that the finite verb moves to a Functional head F in NN subordinate clauses, most of the NN data could be accounted for. The assumption that the finite verb moves to F was made here without much discussion, but obviously this is not an uncontroversial issue and such movement should be motivated independently.

The several adjunction points for adverbs assumed within this account may be related to parametric variation in the sense that languages/dialects may vary with respect to how many of the adjunction points they make use of. StN, for example, apparently only allows the topmost adjunction point, above FP. As was briefly mentioned, the Tromsø dialect seems to differ slightly from the rest of the Northern Norwegian dialects. More specifically, preliminary data indicate that only the two highest adjunction points (above and below FP) are available for any kind of adverb in this dialect. The NN data discussed here suggest that NN allows several more adjunction points for various adverbs.

This account would also assume that there are some restrictions with respect to where different kinds of adverbs may be adjoined in NN. High adverbs such as *heldigvis* 'fortunately' may for example not be adjoined below non-finite auxiliaries (or lower). This was pointed out as a nice result for the 'multiple positions' account as Ernst (2002) and Svenonius (2002) suggest that adjunction positions for adverbs are related to scope and which objects the adverb modifies. Presumably, high adverbs like *heldigvis* 'fortunately' cannot be within the scope of certain verbs, such as the auxiliary *ha* 'have'. This would then be the reason why they cannot be adjoined to a position below such auxiliaries.

However, these multiple adjunction points also allow very low adverbs such as *helt* 'completely' to be adjoined in high positions. This is not expected if scope should determine the adjunction point for adverbs. When adverbs are adjoined in the topmost position, a 'multiple position' approach might assume that intervening projections may be irrelevant for modification in the cases of e.g. adverbs such as *helt* 'completely'. This would generally be the case for StN, as adverbs always are merged in the highest position here. In NN, this would be assumed for the cases when the option of high adjunction is made use of for 'lower' adverbs, unless the various adjunction points in NN correspond to different interpretations of an adverb. As was shown for *helt* 'completely', it is not obvious that such a correlation between interpretation and adjunction point holds.

Thus, although a 'multiple positions' approach can account for most of the NN data, the consequences of making high adjunction points available (or even required, as in StN) for any kind of adverb seem to be quite problematic for the assumption that adjunction of adverbs is determined by the semantic properties of the object the adverbs modify.

Finally, in section 5, a remnant movement approach was discussed with respect to the NN data. This approach was also able to account for most of the data. Reformulating Nilsen's (2003) system somewhat, it was suggested that StN auxiliaries have VP lifters below them, and AdvP lifters above them (Generalisation 1). This generalisation is obligatory in StN, resulting in orders where all adverbs precede all verbs. However, it was suggested here that this generalisation might be optional for some or all auxiliaries in NN sentences, resulting in orders where verbs lacking the lifters will precede adverbs.

This assumption worked well for all cases where verbs ended up preceding adverbs that they take scope over. However, finite verbs may also precede adverbs that take scope over them (i.e. that are merged above them). Such patterns required an additional generalisation, Generalisation 2, which stated that the finite verb may optionally be moved to a high position. The nature of exactly how this movement comes about was questioned, and two possible suggestions were made, one involving head movement, and one involving remnant movement. Both the suggestions required an operation that was distinct from the operations in Generalisation 1. The fact that a separate stipulation had to be made for finite verbs could possibly be a challenge to the remnant movement account.

However, this approach may also make some predictions about parametric variation. Whereas Generalisation 1 holds obligatorily in StN, Generalisation 2 is not available in this variety. In NN, Generalisation 1 was shown to be optional, and Generalisation 2 was available. The preliminary data from the Tromsø dialect indicate that Generalisation 1 is obligatory, as in StN. But contrary to StN, this dialect presumably has Generalisation 2 available, as finite verbs appear to be accepted preceding adverbs, although non-finite verbs are prohibited from pre-adverb positions.

In conclusion, although none of the three appraoches to clausal architecture discussed in this paper are able to account for the NN data without making certain additional stipulations, the remnant movement account seems the most promising of the three. The head movement account is problematic for NN (but not for StN) if one assumes that the HMC in its current version holds. The suggested ways around the HMC violations involving separate positions for adverbs is hard to motivate as they do not directly correspond to differences in interpretation. This latter point is also a problematic issue for the 'multiple positions' account. Assuming that adjunction points for adverbs is determined by scope relations, it is hard to explain why all adverbs have to be adjoined in the topmost position in StN, and may optionally be adjoined in higher positions in NN. The remnant movement approach can account for both the StN data and most of the NN data within a fairly consistent system, and despite the open questions with respect to the movement of finite verbs, at this point, it seems that the remnant movement approach provides the more plausible account for the variability found within NN and between StN and NN with respect to verb movement.

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NOTES

1. The informants for NN used in both Bentzen (2003) and this paper come from various places in Northern Norway, from the Salten region up to Alta. However, it should be pointed out that speakers of the Tromsø city dialect (also a Northern dialect) often have slightly different intuitions. In the current paper, NN therefore refers to Northern Norwegian, excluding the Tromsø dialect.

2. In the following, Norwegian examples not specified otherwise are NN rather than StN. Note furthermore that the NN examples are given in an approximate dialectal form. However, the present tense ending -(e)r is included on verbs although it is actually absent on most NN verbs. The reason for including this is to prevent any confusion as to the finiteness of the verb, as the present tense form in this dialect most of the time is identical to the infinitive.

3. The remaining 13 ungrammatical permutations of (6) all involve the passive auxiliary *blitt* 'been' or the passive participle *ordnet* 'fixed' preceding the adverbs *lenger* 'any longer' or *alltid* 'always'.

4. The b example was found on the Internet. A few similar examples were found in a Google search, and may not specifically be NN.

5. However, as can be seen from the above examples, non-finite perfective auxiliaries appear to be somewhat more acceptable in passive constructions than in active constructions. This point will not be further discussed here.

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