

# VARIABLE VERB SECOND IN NORWEGIAN MAIN AND EMBEDDED CLAUSES

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## ABSTRACT

Norwegian has verb second (V2) word order in main but not embedded clauses. Although as a first approximation V2 is a phenomenon characteristic of root clauses, it has long been known that it occurs also in a restricted set of embedded clauses in Norwegian, as in many, if not all, of the other North Germanic languages. Many Norwegian dialects in addition allow deviations from the standard V2 word order in main clause interrogatives. Hence, the asymmetric verb second pattern seems to break down in different ways in Norwegian. This study presents new data from a large-scale elicited production experiment targeting the placement of the finite verb in both main and embedded clauses in Norwegian. The distribution of deviations from the standard word order pattern, and the constraints on the environments where these are produced, will be of primary concern. While classic accounts of verb second analyse it as involving a macro-parameter, I will argue based on the collected production data that it is necessarily decomposed in several ways, with variation in both main and embedded clauses guided by clause type, assertion, and specific lexical items.

## [1] INTRODUCTION

Norwegian, like all the other North Germanic languages, has a basic SVO word order. The finite verb precedes the object and other material in the VP in both main and embedded clauses.

- (1) Jeg **hører** på radioen i bilen hver dag.  
I listen to radio.DEF in car.DEF every day  
'I listen to the radio in the car every day.'

Still, the subject need not always precede the verb. If the first position in a declarative main clause is occupied by something other than the subject, the finite verb must immediately follow this constituent rather than the subject:

- (2) Hver dag **hører** jeg på radioen i bilen.  
 every day listen I to radio.DEF in car.DEF  
 ‘Every day, I listen to the radio in the car.’

In other words, Norwegian is a verb second (V2) language where the finite verb obligatorily appears in the second position in the clause. In the following, I adopt the analysis of verb second which has developed out of the work of Den Besten (1973), by which the verb moves to C, through I. For convenience, I will assume a fairly standard model of phrase structure, where the clause is divided into three domains: the verbal domain (VP), the inflectional domain (IP), and the clausal domain (CP), where features relating to finiteness, clause type, and illocutionary force are found.

Because of the basic SVO word order, many subject-initial clauses are not unambiguously V2. In such cases, we need additional diagnostics to ensure that the verb has moved out of the VP. It is standardly assumed that the derivation of V2 involves movement of the verb to a higher position in the left periphery (i.e., CP) than the position of negation and other sentence-medial adverbs. The finite verb in V2-clauses thus precedes negation, as in (3).  $V_{fin} < Adv$  order is standardly used as a diagnostic for V2 (see Holmberg 2020 for a recent account), also in subject-initial clauses.

- (3) Jeg **hører** alltid/ikke på radioen i bilen.  
 I listen always/not on radio.DEF i car.DEF  
 ‘I always/don’t listen to the radio in the car.’

Norwegian embedded clauses are typically non-V2: the embedded verb stays *in situ* and follows the adverb (4a). In this respect, Norwegian (like all the Mainland North Germanic (MNG) varieties) differs from Icelandic, and possibly certain varieties of Faroese, which are generally assumed to allow verb movement in embedded contexts, independently of V2, so-called ‘independent V-to-I movement’ (Holmberg & Platzack 1995; Vikner 1995; and more recently Wiklund et al. 2009). Hence, Verb > Adverb order is the standard order in Icelandic embedded clauses (4b).

- (4) a. Jeg spurte om Anne alltid **hører** på radioen i bilen.  
 I asked if Anne always listens to radio.DEF i car.DEF  
 b. Ég spurði hvort Anne **hlustar** alltaf á útvarpið í bílnum.  
 I asked if Anne listens always to radio.DEF i car.DEF  
 ‘I asked if Anne always listens to the radio in the car.’

This split with respect to verb movement in non-V2 contexts has traditionally

been correlated with rich inflectional morphology present in Icelandic but lost in MNG (see Koeneman & Zeijlstra 2014, and Heycock & Sundquist 2017 for recent discussion of this correlation). As is by now well-established, this is not the whole picture. Verb second order is allowed in a restricted set of embedded clauses also in MNG, as exemplified in (5).

- (5) Anne sier at hun **hører** alltid på radioen i bilen.  
 Anne says that she listens always to radio.DEF i car.DEF  
 ‘Anne says that she always listens to the radio in the car.’

Whereas the Icelandic word order in (4b) is often analysed as involving V-to-I movement, embedded Verb > Adverb order in MNG has typically been assumed to involve V-to-C. Since Andersson (1975) and later Vikner (1995), numerous works have dealt with analysing the syntax and semantics of such ‘embedded verb second’ (EV2), which has often been linked to some notion of assertion (see Julien 2020 and references therein).

Unlike the other Mainland North Germanic languages, Norwegian also displays deviations from the verb second pattern in main clauses. That is, non-V2 word order is possible in *wh*-interrogatives in many Norwegian dialects, as in (6a) (see e.g., Lohndal et al. 2020: 778–782 for a short overview). The default V2 order is always possible in these dialects as well (6b), and it is the only option in the Norwegian written standards Bokmål and Nynorsk.

- (6) a. Ka du **hører** på? [dialectal Norwegian]  
 what you hear on  
 b. Hva **hører** du på? [standard Bokmål]  
 what hear you on  
 ‘What are you listening to?’

Finally, all North Germanic varieties allow certain adverbs to precede the finite verb in main clauses; see the Norwegian example in (7).

- (7) Æ rett og slett **ælske** marsipan.  
 I simply love marzipan  
 ‘I simply love marzipan.’

These adverbs are often referred to as focus-sensitive, V3-triggering, or preverbal adverbs (see Nilsen 2003: 79ff. for a discussion of North Germanic focus-sensitive particles in the context of V2-violations).

The word order patterns introduced above are much discussed in the literature on Norwegian specifically and North Germanic more generally.

Together they present an interesting case to explore what factors mediate word order variation within an otherwise standard V2 system. In this paper, I add to the discussion by presenting the results of an experimental elicited production paradigm. The experiment elicits production of variable verb placement in embedded and main clauses and investigates some of the factors that have been suggested to influence this variation. Verb placement is tested in four main conditions across three experiments: embedded clauses with adverbs, embedded *wh*-questions, main clause *wh*-questions, and main clauses with adverbs. The results confirm that embedded V2 is most accessible in assertive complements, and furthermore that the availability of EV2 is sensitive to adverb type. As expected from previous studies, main clause non-V2 is most frequent in *wh*-questions where the *wh*-element is short (e.g., *kem* ‘who’). Finally, non-V2 order is possible with all the preverbal adverbs tested, but all of these adverbs are also produced in a position following the verb (i.e., standard V2-order). In the final sections of the paper, I discuss how these Norwegian results compare to the verb placement patterns in other North Germanic varieties. In addition, I consider the implications of the flexible verb placement for the analysis of the verb second phenomenon.

[2] VARIABLE VERB PLACEMENT IN NORWEGIAN

[2.1] *Optional V2 word order in embedded clauses*

As mentioned above, Norwegian, as all other Mainland North Germanic (MNG) languages, has lost the possibility of V-to-I movement (e.g., Vikner 1995, Wiklund et al. 2009). Embedded clauses are therefore typically non-V2, with all verbs following negation or any medial adverb. This is exemplified with an embedded relative clause in (8) and embedded *wh*-question in (9).

- (8) Dette er plassen [hvor vi alltid **lekte** som barn.]  
 this is place.DEF where we always played as children  
 ‘This is the place where we always played as kids.’
- (9) Hun spurte meg [hvor du alltid **drar** i helgen.]  
 she asked me where you always went in weekend.DEF  
 ‘She asked me where you always go in the weekend.’

However, in certain embedded clauses in Norwegian, the finite verb may move across negation and adverbs, as the result of embedded V-to-C movement. In these clauses, embedded Verb > Adverb order, such as in (5) above, can thus be represented as in (10a), as opposed to (10b), which is string-identical, but the result of V-to-I movement.

- (10) a. [<sub>CP</sub> sub V<sub>fin</sub> [<sub>IP</sub> t<sub>sub</sub> t<sub>V</sub> [<sub>VP</sub> neg/adv [<sub>VP</sub> ... t<sub>V</sub> ...
- b. [<sub>IP</sub> sub V<sub>fin</sub> [<sub>VP</sub> neg/adv [<sub>VP</sub> ... t<sub>V</sub> ...

The possibility for embedded V2 (EV2) is by now well-established, and the distribution of this phenomenon is extensively discussed in the literature on Mainland North Germanic (e.g., Jensen & Christensen 2013 for Danish, Ringstad 2019 for Norwegian), as well as in standard reference grammars. However, there is no clear consensus on the exact characterization of the contexts in which EV2 is possible. Relying on insights from Hooper & Thompson (1973), it has often been argued that the availability of EV2 is connected to some notion of assertion. That is, it is allowed only in cases where the complement is (or could be) assertive (see Wiklund et al. 2009, Julien 2015, 2020 for discussion). Such assertive complements are typically embedded under predicates like *say*, *tell*, *think*, *believe* etc. These environments have been characterised as “*that*-clauses”, “bridge verb complements” or simply “EV2-friendly” contexts (Gärtner 2019). Because assertion is generally incompatible with presupposition<sup>1</sup>, factive verbs such as *regret* – which presuppose the truth of their complement – disallow, or at least disfavour, embedded V2. The same goes for complements of negative verbs such as *doubt* or *deny*, where the speaker does not necessarily commit to the truth of the complement. Embedded V2 is also blocked in clauses with A'-movement, such as in relative clauses or embedded questions (see e.g., (7) and (8) above). These generalizations regarding what are ‘friendly’ and ‘hostile’ environments for EV2 seem to hold for most varieties of Norwegian (see Wiklund et al. 2009), although some examples of factive predicates with embedded V2 have been found in corpora (see e.g., Julien 2007, Ringstad 2019).

In contrast to Standard Norwegian<sup>2</sup>, some regional dialects of Northern Norwegian have been argued to have independent V-to-I movement (despite the fact that these dialects lack the sufficiently rich morphology usually associated with this possibility). That is, Bentzen (2003, 2005, 2007) shows that some

[1] However, see Julien (2020) for discussion of a definition of assertion that is compatible with presupposition.

[2] “Standard Norwegian” refers to the Norwegian written standards and dialects that lie close to these (cf. Section 2.4 for further discussion of spoken and written standards in Norwegian).

regional dialects of Northern Norwegian<sup>3</sup> optionally allow finite verbs to move past adverbs in non-V2 contexts such as relative clauses, subordinate *wh*-questions, and subordinate adverbial clauses, as in (11). Topicalization, a hallmark of V-to-C movement, is not possible here.

- (11) Vi lurte på kem han **lån**te vanligvis penga til.  
 we wondered on who he lent usually money to  
 ‘We wondered who he usually lent money to.’ [Bentzen 2003:581]

Interestingly, the type of adverb also seems to play a role in this variation. More specifically, in Regional Northern Norwegian, the finite verb can appear above sentence-medial adverbs in these clauses, but not above negation (Bentzen 2005: 157–9). Bentzen finds further differences between different adverbs: in both the Tromsø and regional Northern Norwegian dialects, embedded verbs more easily move over certain adverbs (such as *så ofte* ‘so often’), than others (such as *alltid* ‘always’ and *aldri* ‘never’) (Bentzen 2007: 130–2).

In the larger North Germanic language family, similar differences between verb movement past negation in comparison to other adverbs has also been found in the dialect of Kronoby (Northern Ostrobothnian) (Wiklund et al. 2007: 216), and in acceptability judgements of Verb > Adverb order in Faroese (Bentzen et al. 2009). In Faroese, like Northern Norwegian, the acceptability of Verb > Adverb in relative clauses furthermore differs depending on the specific adverb: this word order tends to be rejected with the adverbs *always* and *never*, but accepted with *ofte* (op. cit. 2009: 85). The differences in the acceptability of the verb preceding different adverbs have been linked to differences in the positions of these adverbs in the functional hierarchy, following Cinque (1999). In the structural hierarchy of adverbs, *always* is merged in a relatively low functional projection, and *often* slightly higher. However, an explanation in terms of ‘height’ in Cinque’s hierarchy is not unproblematic for the restrictions on verb movement observed in Northern Norwegian. I refer the reader to Bentzen (2005, 2007) for an extensive discussion of these issues.

## [2.2] *Variable verb placement in Norwegian main clauses*

As mentioned, in Norwegian, variation in finite verb placement can be found not only in embedded clauses, but in main clauses as well. As discussed in the introduction, there are several exceptions to the standard verb second word order in Norwegian main clauses (for a recent overview, see Lohndal et al. 2020).

[3] Crucially for the present study, the Tromsø dialect – spoken by many of our participants – seems to differ slightly from ‘regional Northern Norwegian’ in allowing only finite auxiliaries, not finite main verbs, to precede (some) adverbs (Bentzen 2007).

In this study, I focus on two main clause constructions that display word order variation: declaratives with preverbal adverbs, and *wh*-questions.

“V3-triggering”, or “preverbal” adverbials are available in all North Germanic languages and can take the second position in the clause between a clause-initial element and the finite verb as in (12a).<sup>4</sup> Not all adverbs can occupy this position; many sentential adverbs, including negation, cannot occur preverbally (12b–c).

- (12) a. Norge bokstavelig talt knuste Danmark i finalen.  
 Norway literally crushed Denmark in final.DEF  
 ‘Norway literally crushed Denmark in the final.’
- b. \* Norge dessverre knuste Danmark i finalen.  
 Norway unfortunately crushed Denmark in final.DEF  
 ‘Norway unfortunately crushed Denmark in the final.’
- c. \* Norge ikke knuste Danmark i finalen.  
 Norway not crushed Denmark in final.DEF  
 ‘Norway did not crush Denmark in the final.’

Importantly, sentences like (12a) are still argued by most to involve V-to-C movement, even though the surface order with these adverbs is not V2 (e.g., Brandtler & Håkansson 2017, Julien 2018, Lundquist 2018).<sup>5</sup> Subject-Verb inversion in non-subject initial clauses with preverbal adverbs (13) suggests that this is likely to be the case.

- (13) I går bokstavelig talt knuste Norge Danmark i finalen.  
 yesterday literally crushed Norway Denmark in final.DEF  
 ‘Yesterday, Norway literally crushed Denmark in the final.’

### [2.3] Word order variation in main clause *wh*-questions

Whereas preverbal adverbs are found across varieties of North Germanic, word order variation in main clause *wh*-questions is limited to a subset of Norwegian dialects. In these dialects, main clause *wh*-questions, or at least a subset of *wh*-questions, can occur with both V2 and non-V2 word order. This word order variation has been extensively discussed in Norwegian dialectology (see e.g.,

[4] The adverb *kanskje* ‘maybe’ also occurs with non-V2 word order when it appears in clause-initial position, as illustrated in (i) below. Lohndal et al. (2020: 776) argue that the verb stays in the verbal domain and does not move to C in these sentences (as evident from the lack of subject-verb inversion).

(i) Kanskje været er bedre i morgen.  
 Maybe weather.DEF is better tomorrow  
 ‘Maybe the weather will be better tomorrow.’

[5] On the other hand, Nilsen (2003: 81) argues that the finite verb in these cases is in its usual position in the middle field i.e., that it does not move up to the V2 position, and the word order thus is as in embedded clauses.

Vangsnes 2005, Vangsnes & Westergaard 2014, Westergaard et al. 2017 and references therein). I illustrate the possibility of non-V2 order in (14).

- (14) a. Kem som aldri **kommer** tidsnok?  
 who COMP never came promptly  
 ‘Who never comes on time?’  
 b. Kor du alltid **drar** i helga?  
 where you always went in weekend.DEF  
 ‘Where do you always go in the weekend?’

In (14a), the *wh*-element is the subject of the clause and the complementizer *som* occurs in second position. In (14b), the *wh*-element is not the subject and non-V2 order arises when the subject and verb do not invert. Main clause non-V2 *wh*-questions have the same word order as embedded *wh*-questions: the fact that the adverbs *aldri* and *alltid* occur before the finite verbs in (14) indicate that the verb has not moved.

In dialects that allow *V-in situ* word order in main clause questions, the standard V2 word order is always possible as well, and there are no clear semantic reflexes of the word order choice. The possibility of non-V2 in *wh*-questions differs between dialects and can additionally depend on a range of different factors. Among other things, the length and function of the *wh*-element, and information structure, have been argued to play a role in the complex pattern of variation (see Lohndal et al. 2020 and references there for a comprehensive overview).

#### [2.4] Register variation

In addition to the grammar-internal factors discussed above, extralinguistic factors may also influence verb placement. Specifically, register may play a role in the variation in two of the phenomena discussed above. At least in Mainland North Germanic, embedded verb second is found to be more frequent in spoken than in written corpora (see e.g., Garbacz 2005 for Norwegian, Jensen and Christensen 2013 for Danish). Similarly, non-V2 *wh*-questions are not part of the standard Norwegian written language, but only licensed in local dialects and therefore likely to be produced more in the spoken language.

Variation due to register presents an additional challenge when setting up an experimental study. It is a well-known task effect in dialectological and socio-linguistic research that elicitation using written material can trigger standardisation in participants’ spoken responses (Cornips & Poletto 2005). Written forms are moreover often unduly influenced by prescriptive educational practices (Cornips & Jongenburger 2001: 55–56). The Norwegian written



standards Bokmål and Nynorsk do not necessarily match any specific spoken vernacular, and apart from in specific contexts such as theatre and news broadcasts, these written standards are hardly spoken (Vikør 1993). The existence of a spoken standard is contested. It has been argued that the variety spoken by the socio-economically prestigious in the Oslo area, which lies close to the Bokmål written standard, is conceived as a norm ideal (Mæhlum 2009). However, Sandøy (2009, 2011) argues that one should differentiate between a norm ideal or prestigious variety and a spoken standard: Local spoken varieties are used in all types of situations, from dialog with friends and family to education, politics and increasingly in media, as well. These dialects can differ from the orthographic representation of standard Bokmål/Nynorsk with respect to morphology, morpho-phonology, lexicon, and to some extent syntax. As a result of this language situation, the Norwegian speakers in this study could in principle be considered bi/multi-lectal. That is, most (if not all) adult Norwegian speakers are unmistakably proficient users of both their local dialect and a more standardised register, at least in the written form (e.g., Språkrådet 2017, Vangsnes 2019).

In the present study, I examine the effect of elicitation mode on participants' responses, by comparing the outcomes of two elicitation modes, while testing the same material. For this purpose, two versions of the experiment were constructed: one using written Bokmål Norwegian to elicit production data, and one with spoken language as the elicitation mode. I will further discuss this set-up in Section 3.3.

### [3] METHODOLOGY: ELICITATION OF MAIN AND EMBEDDED CLAUSES

To get an overview and understanding of the different deviations from the standard word order pattern, an elicited production study was set up.<sup>6</sup> The study comprises three experiments focussing on variable verb placement in Norwegian. All three experiments use the same elicitation paradigm and are effectively different versions of the same experiment. The method has developed gradually, and conditions and items were therefore added, changed or removed in the different versions. Table 1 provides an overview of the set of experiments.

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[6] This study is part of a research project developing the Nordic Word order Database (NWD). The NWD is a collaboration between researchers from the University of Oslo, UiT The Arctic University of Norway, and Østfold University College. It focusses on a range of syntactic phenomena that show variation within and between the North Germanic languages. The experimental paradigm discussed in this paper (testing verb placement) was developed by Björn Lundquist and Maud Westendorp. The motivations, design, and material of the experiments for the NWD-project are described in greater detail in Lundquist et al. (2019). The materials were checked by various native speakers, and several other researchers and research assistants helped with the data collection and analysis (see Acknowledgements).

| Exp. | Syntactic structures   | Elicitation mode | Group | # of speakers |
|------|--|------------------|-------|---------------|
| 1    | embedded clauses (EV2 and embedded <i>wh</i> -questions)                     | written          | A     | 16            |
| 2    | embedded clauses + main clauses (preverbal adverbs and <i>wh</i> -questions) | written          | B     | 11            |
|      |  |                  | C     | 29            |
| 3    | embedded clauses + main clauses  | spoken           | D     | 48            |
|      |  |                  | C     | 30            |
|      |  |                  | D     | 36            |

TABLE 1: Overview of experiments and participant groups.

In the first experiment, we tested only embedded clauses. In the latter two experiments, we added main clauses in addition to the embedded material from Experiment 1. The third experiment differs from the second version in elicitation mode. Although the data collected in all three experiments is always spoken language, the participants are presented with written standard (Bokmål) Norwegian in the first two experiments, and with spoken dialect in Experiment 3. A total of 107 speakers of Norwegian participated in the three tasks. 171 sessions were recorded with four groups of participants in Tromsø, Northern Norway. Note that two of the groups (C and D) took part in both Experiment 2 and 3.

### [3.1] *Participants*

Data collection took place in Tromsø at three different locations: at two local high schools and at UiT The Arctic University of Norway. In total, 107 Norwegian speakers over four groups participated in the experiments (see Table 2). Of the speakers in group C, 26 participated in both Experiment 2 and Experiment 3; 36 speakers in group D participated in both experiments, whilst 12 only did Experiment 2.

| Group/Location             | Experiments | Speakers (male/female) | Age range (mean) |
|----------------------------|-------------|------------------------|------------------|
| A. Tromsø high school I    | 1           | 16 (9/7)               | 18 (18.0)        |
| B. adult population at UiT | 2           | 11 (6/5)               | 22–62 (33.3)     |
| C. Tromsø high school II   | 2 & 3       | 32 (10/22)             | 15–30 (16.7)     |
| D. UiT student cohort      | 2 & 3       | 48 (17/31)             | 20–37 (23.3)     |

TABLE 2: Break-down of participant groups.

For the analysis, we excluded the data of 5 non-native speakers of Norwegian. Of the remaining participants, 8 had additional, simultaneously acquired, first languages (Dari, English, or North Sami). The participants all grew up in Norway (Figure 1), and approximately 75% grew up in Northern Norway (79/102 participants). Of the other participants, 3 spoke a Central Norwegian dialect, 6 spoke a West-Norwegian dialect, and 14 an East-Norwegian variety.<sup>7</sup> All participants gave their informed consent before testing and were compensated for their time with either a gift card (group B), course credit (group D) or 50 NOK per participant to be added to a joint class account (high school students A/C).

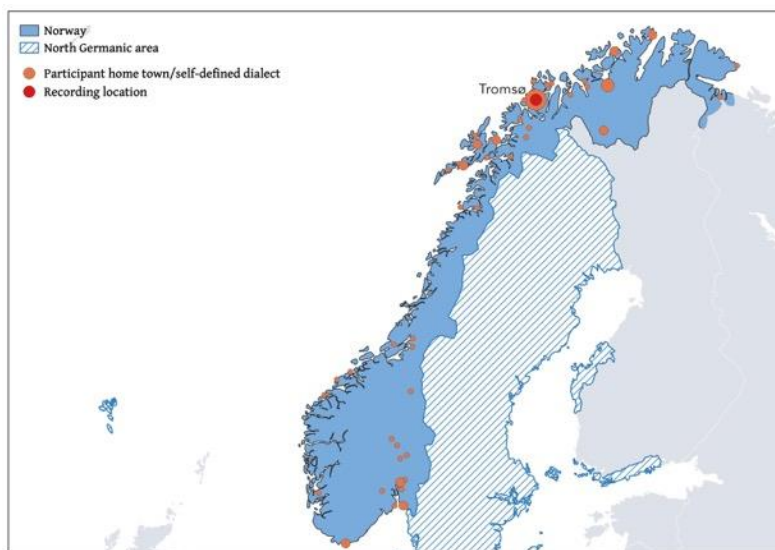


FIGURE 1: Overview of hometowns/self-defined dialect of the participants.

### [3.2] *Experimental design*

To elicit main and embedded clauses, the experiments included two different tasks: transformation of main clauses into embedded clauses (see (15)), and the opposite transformation of embedded-to-main clauses (16). Each item is presented in the following way on a computer screen: the participant is shown a background sentence ((15a) and (16a)) and is asked to read this sentence aloud. When the participant has read the background sentence, a trigger/prompt appears. This takes the form of the start of a new sentence (as in (15b)), or just a proper name (as in (16b)). The participant is then asked to complete this utterance using the words from the background sentence (response in

[7] This grouping of Norwegian dialects is commonly used in recent literature (see e.g., Mæhlum & Røyneland 2012: 43f.)

parentheses; optional placement in curly brackets).

(15) a. (Marit:) Jeg kommer aldri for sent på jobb. [background]  
 I come never too late at work  
 ‘I never get to work late.’

b. Marit sier at ... [trigger]

Marit says that ...

(hun {kommer} aldri {kommer} for sent på jobb.) [response]

she come never come too late at work

‘Marit says she never gets to work late.’

(16) a. Pål sa at han rett og slett hater lakris. [background]

Pål says that he simply hates liquorice

‘Pål said that he simply hates liquorice.’

b. Pål: [trigger]

(Jeg {hater} rett og slett {hater} lakris.) [response]

I hate simply hate liquorice

‘I simply hate liquorice.’

The example in (15) tests the placement of the embedded verb with respect to the adverb *aldri* ‘never’, i.e., the possibility of embedded V2. Using the paradigm exemplified in (16), we can test the placement of finite verbs in main clauses, here with respect to the adverb *rett og slett* ‘simply’.

### [3.3] Materials

#### 3.2.1 Embedded and main clause conditions

All three experiments have the same structure and consist of 2 parts of equal length with a break in between (72–80 items in total). The basic build-up across experiments is summarised in Table 3. Note that the number of items per experiment varies slightly (e.g., more items in Experiment 3). I will return to these changes at the end of this section. An overview of the exact number of items in each (sub)condition per experiment can also be found in Appendix A1. In the following, I discuss the different conditions and subconditions used across experiments.

| Phenomenon                             | Task                 | Exp. | # of items | Subconditions   |
|--|----------------------|------|------------|---|
| 1. embedded<br>Verb > Adverb           | main-to-<br>embedded | 1    | 18         | clause type (assertive, factive,<br>interrogative)<br>adverb ( <i>always, often, never, not</i> ) |
|  |                      | 2    | 20         |   |
|  |                      | 3    | 20         |   |
| 2. embedded<br><i>wh</i> -questions    | main-to-<br>embedded | 1    | 12         | subject and non-subject <i>wh</i> -questions<br>short and long <i>wh</i> -elements                |
|  |                      | 2    | 12         |   |
|  |                      | 3    | 10         |   |
| 3. main clause<br>V2-/V3-<br>adverbs   | embedded-<br>to-main | 2    | 16         | regular sentence-medial adverbs<br>preverbal/V3-adverbs   |
|  |                      | 3    | 18         |   |
| 4. main clause<br><i>wh</i> -questions | embedded-<br>to-main | 2    | 16         | subject and non-subject <i>wh</i> -questions<br>short and long <i>wh</i> -elements                |
|  |                      | 3    | 20         |   |
| 5. control/<br>filler items            | both                 | 1    | 12         | declaratives and embedded<br>interrogatives without adverbs                                       |
|  |                      | 2    | 12         |   |
|  |                      | 3    | 20         |   |

TABLE 3: Build-up of the three experiments.

To study the possibility of having embedded V2, i.e., **embedded Verb > Adverb** order, we set up sentences of three different **clause types** and with different **adverbs**. We used the complements of the assertive verb *sier at* ‘said that’ with which EV2 is generally available in Norwegian (for an example, see (15) above), the factive predicate *er stolt av* ‘is proud of’ in which EV2 is thought to be strongly disfavoured, and *spurte om* ‘asked whether’ introducing indirect yes/no questions, which should prohibit high placement of the verb. For each clause type, we included both non-reflexive (e.g., *kjøre* ‘drive’) or reflexive verbs (e.g., *barbere seg* ‘shave oneself’)<sup>8</sup>, and 3 different medial adverbs (*ofte* ‘often’, *aldri* ‘never’, *alltid* ‘always’). Experiments 2 and 3 also included items with the negative adverb *ikke* ‘not’.<sup>9</sup> An example of this condition, here with a factive predicate, is

[8] We used both non-reflexive and reflexive verbs to explore the possible interactions of verb movement and object shift (here: a light pronominal object (*meg/seg* ‘my/him/herself’)), i.e., Holmberg’s Generalization (Holmberg 1986). An analysis of this interaction lays beyond the scope of this paper, but Lundquist & Westendorp (2020) and Westendorp & Lundquist (2021) discuss how variable NP-subject placement in Norwegian and variable verb placement in Faroese is affected by the presence of the reflexive.

[9] In many studies of embedded verb placement, the position of the finite verb with respect to negation is used as an indicator of embedded verb movement. However, because of the possibilities of the embedded finite verb moving past adverbs, but not negation, in varieties of Northern Norwegian, we initially used adverbs only, though we later included negation as well.

given in (17) (variable placement in curly brackets).

- (17) Pål er stolt av at ... [trigger]  
 Pål is proud of that ...  
 han {oppfører seg} alltid {oppfører seg} bra [response]  
 he behaves REFL always behaves REFL well  
 på skolen.  
 on school.DEF  
 ‘Pål is proud that he is always well behaved at school.’

The embedded V2 items were alternated with items targeting **embedded *wh*-questions** (main verb: *spurte* ‘asked’/*ville vite* ‘wanted to know’) or declarative fillers (main verb: *er sikker på at* ‘is sure that’/*tror at* ‘thinks that’). No adverbs or reflexive verbs were used in these conditions. These items function as fillers for the embedded verb placement condition. Because no word order variation is expected in these clauses (i.e., these embedded clauses should all have non-V2 order), they are essentially controls that are also used to test if participants understand the task of transforming main clauses into embedded clauses (or *vice versa*): we expect a complementizer/relative marker to be produced in embedded subject *wh*-questions (see (18)), and there to be absence of subject–verb inversion in embedded non–subject *wh*-questions (19). Finally, we included some declarative clauses as fillers; see (20).

- (18) Anne spurte ... [trigger]  
 Anne asked  
 hva slags band {som} spilte på festivalen i helgen. [resp.]  
 what type bands that played on festival.DEF in weekend.DEF  
 ‘Anne asked what kind of bands played the festival this weekend.’
- (19) Ole spurte (hvilke filmer {så} Pål {så} i går.) [trigger &  
 Ole asked which films saw Pål saw y.day response]  
 ‘Ole asked which films Paul watched yesterday.’
- (20) a. (Pål:) Turen i morgen er avlyst. [background]  
 (Pål:) trip.DEF tomorrow is cancelled  
 ‘The trip tomorrow is cancelled.’

- b. Pål er sikker på at ... [trigger]  
 Pål is sure at that  
 turen i morgen er avlyst. [response]  
 trip.DEF tomorrow is cancelled  
 ‘Pål is sure that the trip tomorrow is cancelled.’

The first main clause adverb condition is **main clause adverbs**, and it included two subconditions testing verb placement with respect to regular **sentence-medial ‘V2-adverbs’** such as *dessverre* ‘unfortunately’ and *unektelig* ‘undeniably’, or one of the following **V3-adverbs**: *mer enn* ‘more than’, *simpelthen* ‘simply’, *bokstavelig talt* ‘literally’, *nesten* ‘almost’ (as a verb-modifying adverb), *så godt som* ‘as good as’, and *rett og slett* ‘simply’. With these preverbal adverbs, Adverb > Verb order (linear non-V2) is expected to be allowed. Sentence-medial adverbs such as *vanligvis* ‘usually’, on the other hand, are not expected to be produced before the verb (21).

- (21) a. Pål sa at han vanligvis hater kjøttkaker [background]  
 Pål said that he normally hates meatballs  
 ‘Pål said that he normally hates meatballs.’  
 b. Pål: [trigger]  
 Jeg {hater} vanligvis {hater} kjøttkaker [response]  
 I hate normally hate meatballs  
 ‘I normally hate meatballs.’

The second main clause condition is **main clause wh-questions**. This condition included both **subject-** and **non-subject wh-questions** ((22) and (23), respectively), and furthermore always included an equal amount of **short** (e.g., *hva* ‘what’) and **long wh-expressions** (e.g., *hvilke barn* ‘which kids’).

- (22) a. Eirik spurte hvor mange lag deltok i turneringen.  
 Eirik asked how many teams partook in tournament.DEF  
 ‘Eirik asked how many teams took part in the tournament.’  
 b. Eirik: [trigger]  
 (Hvor mange lag {som} deltok i turneringen? [response]  
 how many teams COMP partook in tournament.DEF  
 ‘How many teams took part in the tournament?’
- (23) a. Jonas spurte hva hun jobbet med. [background]  
 Jonas asked what she worked with  
 ‘Jonas asked what she does for work.’

|                                  |  |  |  |  |            |
|----------------------------------|--|--|--|--|------------|
| b. Jonas:                        |  |  |  |  | [trigger]  |
| (Hva {jobbet} hun {jobbet} med?) |  |  |  |  | [response] |
| what worked she worked with      |  |  |  |  |            |
| ‘What does she do for work?’     |  |  |  |  |            |

Several native speakers checked the experimental items to remove any errors. We piloted all three experiments with at least one native speaker prior to data collection.

### 3.2.2 *Minor changes to the stimuli between experiments*

The focus of the present study is syntactic variation. Nonetheless, we were also interested in testing morpho(phono)logical, lexical, and phonological variation in the Tromsø-dialect.<sup>10</sup> For that purpose, some modifications were made to the set of experimental items in Experiments 2 and 3 for testing with groups C and D (see Table 1 above). More specifically, we altered some of the test sentences to include words that show interesting variation in the local dialect or Northern Norwegian. One example is the adverb *bestandig* ‘always’, an alternative to the Standard Norwegian *alltid* in many Norwegian dialects.

### [3.4] *Experimental procedure*

The experiments were all run on laptops using the software OpenSesame (Mathôt et al. 2012). Experiment 1 and 2 were carried out with individual participants. For every item in the experiment, participants first read the background sentence on the computer screen, and then (after a button-press by the experimenter to present the participant with the trigger) produced the target sentence.

For the final experiment (Exp. 3), we developed a version of Experiment 2, including all the same syntactic conditions, but with the elicitation background sentences in spoken local dialect instead of written Bokmål Norwegian (which was used in the first two experiments). Changing the elicitation mode allows us to limit potential standardisation and at the same time investigate the effects of elicitation mode and register (cf., discussion in Section 2.3). In Experiment 3, participants were paired up and took turns producing target items.<sup>11</sup> Instead of facing a computer screen, the pair of participants faced a pair of experimenters who provided the background sentences by reading them out loud from a computer only they could see. The following sequence was repeated for every

[10] This variation is discussed extensively in Lundquist et al. (2020).

[11] Because the experiment was conducted in pairs, each participant produced not 80 but 40 responses in this set-up.



experimental item: One experimenter provided a background sentence to the first participant, who was then tasked to relay the sentence to the other experimenter. An example is given in (24). The background sentence in (24a) is produced by the first experimenter (here called Eline), and the sentence in (b) is the expected response from the participant.

- (24) a. Experimenter: Eg kjøre ofte bil til jobb. [background]  
 I drive often car to work  
 'I often drive to work.'
- b. Participant: Eline sa at ho ofte kjøre bil til job.  
 Eline said that she often drives car to work  
 'Eline said that she often drives to work.'

After each item, the experimenters and participants switched turns, so that the next background sentence was produced by experimenter 2, and the second participant relayed this message back to experimenter 1.<sup>12</sup> We chose this set-up to mimic, as much as possible, a natural dialog setting. During the first half of the experiment (i.e., the main-to-embedded task as in (23)), the participants were given a note with two trigger sentences (*X sa at.../X spurte...* 'X said that.../asked...') on it to prompt them with the right context for embedding the stimuli. The sentence in (25) is an example from the second half of the experiment, where we elicited main clauses. The participants were again asked by one experimenter to relay a message to the other experimenter.

- (25) a. Experimenter: Si til Eline at æ nesten [background]  
 say to Eline that I almost  
 hylte av glede etter kampen.  
 howled of joy after match.DEF  
 'Tell Eline that I almost howled of joy after the match.'
- b. Ho Sofie nesten hylte av glede etter kampen. [response]  
 She Sofie almost howled of joy after match.DEF  
 'Sofie almost howled of joy after the match.'

Across experiments, participants' spoken responses were recorded using handheld digital audio recorders. A limited number of recordings were made

[12] Two groups of speakers participated in Experiment 3 (i.e., groups C and D). With group C, the experimenters were both native speakers of Northern Norwegian dialects. In the second iteration of the experiment (group D), we had two sets of experimenters: a pair of experimenters who spoke Northern Norwegian, and a pair who spoke Eastern Norwegian. The effects of this manipulation (i.e., background sentences provided in Northern Norwegian vs. Eastern Norwegian) have not yet been analysed, but I expect there to be only small effects on the syntactic variables, though possibly greater, and interesting effects on the (morpho-) phonological variables.

with an external lapel microphone. All recordings were made in WAV-format at 44.1 kHz audio sampling rate, with a bit depth of 16. All the audio data collected is freely accessible in the [online Nordic Word order Database](#).

Due to technical issue with the audio recording, 5 of 48 sessions with group C and a further 19 responses from one participant had to be discarded from the results (Exp. 2).

### [3.5] *Analysis*

All elicited utterances were tagged for word order using the annotation software ELAN (Wittenburg et al. 2006) to ascertain the word order used across items. All statistical analyses were conducted using the statistical programming language R (R Core Team 2020). The package ‘tidyverse’ (Wickham et al. 2019) was used for data processing and visualization. The package ‘lme4’ (Bates et al. 2015) was used for modelling. To establish the factors strongly impacting word order choice, I analyzed the results with mixed effects logistic regression. I chose this method because the response variables are categorical, the observations are dependent, and these models allow for both fixed and random effects. To ensure a binary outcome variable, utterances marked ‘other’ were disregarded, and only V2 and non-V2 word order was considered. As random effects, I always included random intercepts for participants and items. Fixed effects are tested for significance by comparing a model which lacks that fixed effect to the full model; p-values were computed via likelihood ratio tests with the afex package (Singmann et al. 2021).

## [4] RESULTS: FLEXIBLE VERB PLACEMENT IN EMBEDDED AND MAIN CLAUSES

In this section, I discuss the placement of the finite verb in the four different experimental conditions: embedded V2, embedded *wh*-questions, main clause adverbs, and main clause *wh*-questions. The results are discussed per condition, collapsing the results from all three experiments. Section 5 compares the results of Experiments 2 and 3 which tested the same conditions with two different elicitation modes (written/spoken language), in order to examine the effect of elicitation mode on participants’ production. As we will see, the effects of elicitation mode are minimal, and only clearly affect the production of non-V2 order with preverbal adverbs.

### [4.1] *Embedded Verb Second*

The results include a total of 2,424 observations from 3 experiments and 101 unique speakers in the embedded verb second condition; see Table 4 for a summary. The results are split by the subcondition clause type.

| Produced word order       | assertive verb complement (%) | factive adjective complement (%) | indirect question (%) |
|---------------------------|-------------------------------|----------------------------------|-----------------------|
| Adverb > Verb (V3)        | 1214 (84.4)                   | 371 (83.7)                       | 443 (84.5)            |
| Verb > Adverb (V2)        | 162 (11.3)                    | 42 (9.5)                         | 66 (12.6)             |
| Other                     | 63 (4.4)                      | 30 (6.8)                         | 15 (2.9)              |
| <b>Total observations</b> | <b>1439 (100)</b>             | <b>542 (100)</b>                 | <b>443 (100)</b>      |

TABLE 4: Word order produced per clause type in EV2-condition, percentages in brackets.

It is striking how little variation there is in terms of the portion of Verb > Adverb order between the three types of complements. Rather, embedded verb second is produced in assertive, factive and interrogative complements at roughly the same rate (9.5–12.6%). Most remarkable is the high percentage of Verb > Adverb order in indirect questions as embedded V2 is expected to be blocked in this clause type. An example of a V2 embedded question from the elicited data is given in (26). I will return to this unexpected result at the end of this section.

- (26) Anne spurte om Ole sætt sæ alltid fræmst  
 Anne asked if Ole sits REFL always in.front  
 i klasseromme.  
 in classroom.DEF

‘Anne asked if Ole always sits at the front of the classroom.’ [part. T309]

Remember that the embedded V2 condition also tested the word order with different adverbs. We included four different adverbs: *ikke* ‘not’, *aldri* ‘never’, *aldri* ‘always’, and *ofte* ‘often’. Negation was only added in Experiment 2 and 3, and only in the assertive complement subcondition. The other adverbs, *aldri*, *alltid* and *ofte*, are evenly spread over the clause types. I split the results by adverb in Table 5.

| Produced<br>word order | <i>ikke</i><br>'not' (%) | <i>aldri</i><br>'never' (%) | <i>alltid</i><br>'always' (%) | <i>ofte</i><br>'often' (%) |
|------------------------|--------------------------|-----------------------------|-------------------------------|----------------------------|
| Adverb > Verb          | 173 (86.9)               | 577 (93.7)                  | 690 (86.8)                    | 588 (73.9)                 |
| Verb > Adverb          | 15 (7.5)                 | 19 (3.1)                    | 80 (10.1)                     | 156 (19.6)                 |
| Other                  | 11 (5.5)                 | 20 (3.2)                    | 25 (3.1)                      | 52 (6.5)                   |
| <b>Total</b>           | <b>199 (100)</b>         | <b>616 (100)</b>            | <b>795 (100)</b>              | <b>796 (100)</b>           |

TABLE 5: Word order produced in EV2-condition with different adverbs, percentages in brackets.

From the results in Tables 4 and 5, it seems that adverb, but not clause type, influences the proportion of embedded Verb > Adverb order produced in embedded clauses. That is, the proportion of embedded V2 order with the negation and the adverb *aldri* 'never' (resp. 7.5% and 3.1%) is much smaller than the proportion of embedded V2 produced with the adverbs *alltid* 'always' (10.1%) and *ofte* 'often' (19.6%).

One might question the validity of using adverbs as a diagnostic for embedded V2. Unlike the negative marker *ikke*, many sentence-medial adverbs can appear in a clause-final position in North Germanic, as in English, as well as at the left periphery of the VP. The possibility of clause-final placement of an adverb means that embedded clauses with intransitive finite verbs followed by an adverb are structurally ambiguous between a derivation with a raised verb and a sentence-medial adverb and a derivation with a sentence-final adverb. Of the adverbs in our study, only *ofte* occurs clause-finally in Norwegian; cf. (27) and (28).<sup>13</sup>

- (27) a. Hun leser slike bøker ofte.  
           she reads such books often  
       b. Jeg tviler på at hun leser slike bøker ofte.  
           I doubts on that she reads such books often  
           '(I doubt) she reads such books often.'
- (28) a. \*Hun leser slike bøker aldri/alltid/ikke.  
           she reads such books never/always/not

[13] These examples were provided by anonymous reviewer, who also rightfully pointed out that some experimental items allowed for linear Verb > Adverb order that are the result of sentence-final placement of the adverb without a true indication of verb movement.

- b. \*Jeg tviler på at hun leser slike  
 I doubt on that she reads such  
 bøker aldri/alltid/ikke.  
 books never/always/not  
 ‘(I doubt) she reads such books never/always/not.’

In the case of *ofte*, additional VP-internal material (e.g., an object or verb particle) is needed to determine whether Verb > Adverb order is the result of verb movement to the left (above *ofte* in the ‘medial’ position), or of underlying clause-final placement of the adverb. In the latter cases, the verb potentially has stayed *in situ*. Unfortunately, some of the items with *ofte* in our experiments included intransitive verbs, making it impossible to be certain if the verb has moved to the V2 position. One such item is given in (29). This is in fact the experimental item with the largest percentage of Verb > Adverb order, namely 44.9%.

- (29) a. (Anne:) Snør det ofte i Tromsø? [background]  
 snows it often in Tromsø  
 ‘Does it often snow in Tromsø?’  
 b. Anne spurte om det {snør} ofte {snør} [response]  
 Anne asks if it snows often snows  
 i Tromsø.  
 in Tromsø  
 ‘Anne asked if it often snows in Tromsø.’

After removing all responses with potentially ambiguous items (i.e., without any additional VP-internal material,  $N = 267/796$ ),<sup>14</sup> the embedded clauses with *ofte* still had the highest percentage of EV2-order (collapsing the different clause types: 13.3% V>A, 80.0% A>V; cf. Table 5) compared to the items with other adverbs. To compare the V2 (V>A) and V3 (A>V) orders, I fitted a logistic mixed model of the relationship between the produced word order and the different adverbs. There was a statistically significant effect of Adverb on word order choice in the EV2-condition (Figure 2,  $\chi^2(2) = 26.04, p < .001$ ).<sup>15</sup> As we also saw in Table 5 above, Verb > Adverb order is clearly more common with the adverbs *ofte* and *alltid* than with *ikke* and *aldri* (Figure 2). I will discuss the differing word order possibilities across adverbs in depth in Section 6.

[14] All EV2-test items with *ofte* are provided Appendix A2.

[15] Inclusion of by-participant random slopes for adverb in addition to by-participant random intercepts led to an overparametrised model (i.e., almost perfect correlation of the random effects for participants). With the risk of increasing the Type I error rate, the model was simplified by removing the random slopes (Baayen et al. 2008).

The difference in the percentage of EV2 between the three clause types for all three adverbs is much clearer in the cleaned dataset (Figure 2). When collapsing the data from the different adverbs together, there is less Verb > Adverb order in factive complements (4.4%), as well as in interrogative complements (2.8%), than in assertive complements (11.2%).<sup>16</sup>

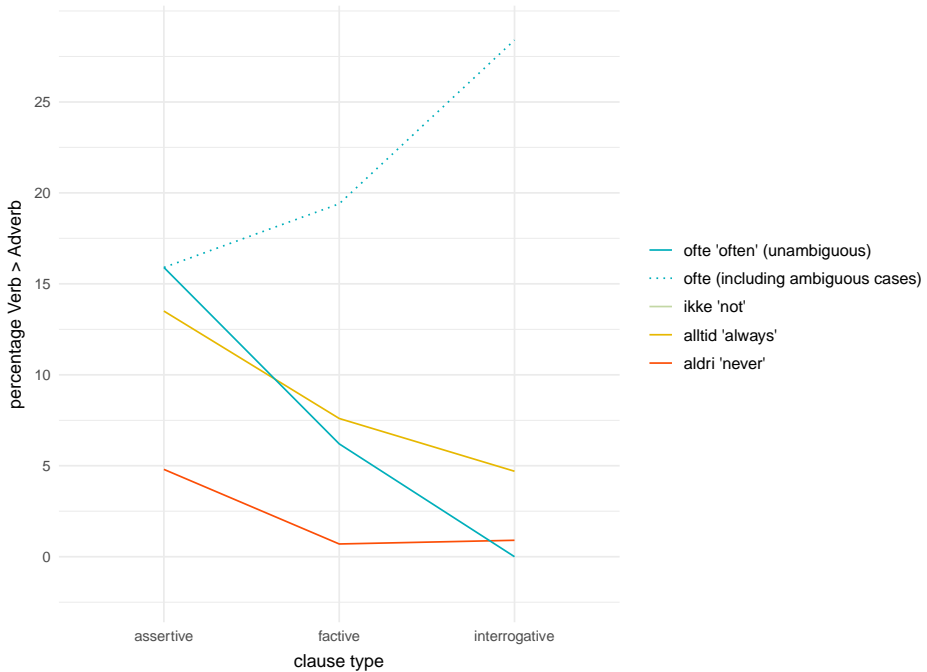


FIGURE 2: Both adverb\*\* and clause type\*\* influence the proportion of Verb > Adverb order produced. Dotted line includes potentially ambiguous cases of EV2 with the adverb ofte. Statistics performed by likelihood ratio tests comparing model with predictor to null-model,  $p < .01$  (Adverb)/ $p < .001$  (Clause Type)

#### [4.2] *Embedded wh-questions*

The second embedded clause condition tested word order in embedded *wh*-questions, with two subconditions based on the  $\pm$ subjecthood of the *wh*-element. This condition was included in all three experiments, and we therefore have 1.517 observations from 101 unique speakers. In both subconditions, most of the utterances are produced with the standard embedded clause non-V2 word order as expected (Table 6).

[16] This effect of Clause Type on word order choice in the adjusted dataset is statistically significant ( $\chi^2(2) = 23.657, p < .001$ ). In addition to random intercepts for participants and items, this model included by-participant random slopes for Clause Type.

| Produced word order       | Embedded subject <i>wh</i> -question (%) | Embedded non-subject <i>wh</i> -question (%) |
|---------------------------|--|--|
| V3                        | 538 (89.4)                               | 840 (91.8)                                   |
| V2                        | 56 (9.3)                                 | 55 (6.0)                                     |
| Cleft                     | 6 (1.0)                                  | 2 (0.2)                                      |
| Other                     | 2 (0.3)                                  | 18 (2.0)                                     |
| <b>Total observations</b> | <b>602 (100)</b>                         | <b>915 (100)</b>                             |

TABLE 6: Word order produced in embedded *wh*-question-condition, split by  $\pm$ subjecthood. Percentages provided in brackets.

Examples of an embedded subject *wh*-question (30) and an embedded non-subject *wh*-question item (31) from the elicited production are given in (30) below (participant number in brackets). Both (a)-sentences have the expected non-V2 order, whereas the (b)-sentences are examples with non-target V2 order. This V2-word order in the embedded clause is the result of either omitting the (obligatory) complementizer *som* (30b) or lack of subject-verb-inversion (31b).

- (30) a. Eline spurte om hvilke unger som kom til bursdag.  
 Eline asked about which kids COMP came to birthday.  
 ‘Eline asked which kids came to the birthday party.’ [participant NOR024]
- b. Eline spør korsn unga kom på bursdagsfesten?  
 Eline asked which kids came to birthday.party.DEF  
 ‘Eline asked: “which kids came to the birthday party?”’ [KO12]
- (31) a. Anne spurte om ke ho Marit kjøpte i butikken.  
 Anne asked about what she Marit bought in store.DEF  
 ‘Anne asked what Marit bought in the store.’ [participant NOR044]
- b. Han Pål spurte ka kjøpte ho Marit i butikken.  
 he Pål asked what bought she Marit in store.DEF  
 ‘Pål asked: “what did Marit buy in the store?”’ [participant T208]

When V2 word order is used in embedded *wh*-questions (30/31b), these questions can be understood as direct questions or quotes and accordingly often included a prosodic break before the *wh*-element. In such cases, one can reason that the *wh*-clause is necessarily not embedded, thus accounting for the V2 order (see also Stroh-Wollin 2002: 148).

Interestingly, there is a slight difference between the two types of embedded

*wh*-questions in the proportion of items produced with main clause order. V2-order is used slightly more often in embedded questions where the *wh*-phrase is the subject (as in (30b)) than in non-subject questions (31) (9.3% vs. 6.0% V2 resp.). Arguably, V2 order lies closer at hand in embedded subject *wh*-questions as this only involves omission of the otherwise obligatory complementizer *som*. Having main clause V2-order in non-subject questions, on the other hand, involves subject–verb inversion (31). Note though that while the surface order is V2 when *som* is omitted in subject *wh*-questions, we cannot be sure that the verb has moved to C without the presence of an adverb, or other diagnostic. Closer examination of the data shows that the difference between the two question types is clearly driven by items with long *wh*-elements such as *hvordan* ‘how’ or *hva slags* ‘what kind of’ that are more often produced without the complementizer *som*, as well as a small subset of participants who produce predominantly main clause word order.<sup>17</sup>

The results also include eight examples of the use of a cleft construction within an embedded *wh*-question (see Table 6 above). Most of the ‘other’ responses are non-subject questions made into subject-*wh* questions, as in (32). It is likely that the complementizer *så* (*som*) and the expletive subject *det* ‘it’ compete for the same position here; compare (32b) with the target (32c).

- (32) a. (Ole:) Hvor mye snø kom det i går?  
           how much snow came it yesterday  
           ‘How much did it snow yesterday?’
- b. Ole ville vite kor mye snø så kom i går.  
           Ole wanted to.know how much snow that came yesterday  
           ‘Ole wanted to know how much snow came yesterday.’ [part. KO13]
- c. Ole ville vite kor mye snø det kom i går.  
           Ole wanted to.know how much snow it came yesterday  
           ‘Ole wanted to know how much it snowed yesterday.’ [target]

#### [4.3] Main clause adverbs

In the first main clause condition, we tested placement of the verb with respect to two types of adverbs: sentence-medial (V2) adverbs such as *vanligvis* ‘usually’ and *dessverre* ‘unfortunately’, and preverbal (V3) adverbs like *rett og slett* ‘simply’ and *bokstavelig talt* ‘literally’ which may precede the finite verb. This condition was included in Experiments 2 and 3, and we have a total of 1,728 observations

[17] Two participants consistently produce V2 word order in this condition (i.e., NOR006, NOR020). Both of these participants do vary between V2 and non-V2 order in the EV2-condition, and their results follow the overall trends in the data for that condition. Therefore, I see no reason to exclude them from the analyses based on their production in this ‘control’ condition.



from 85 speakers. For both types of adverbs, the Verb > Adverb (V2) order provided in the background sentences was often maintained, and it is proportionally the most produced word order in both subconditions; see Table 7.

| Produced word order       | V2-adverbs (%)   | V3-adverbs (%)   |
|---------------------------|------------------|------------------|
| Verb > Adverb (V2)        | 515 (68.5)       | 429 (44.0)       |
| Adverb > Verb (V3)        | 26 (3.5)         | 405 (41.5)       |
| Adverb first              | 171 (22.7)       | 7 (0.7)          |
| Other                     | 40 (5.3)         | 135 (13.8)       |
| <b>Total observations</b> | <b>752 (100)</b> | <b>976 (100)</b> |

TABLE 7: Word order produced in main clause adverb-condition with V2- and V3-adverbs, percentages per subcondition in brackets.

Participants seem to have different strategies with the two types of adverbs: when V2-adverbs are not produced in their canonical position following the verb, they are often placed initially, as in (33).

- (33) Hældivis (så) endre være sei i hælja.  
 luckily so changed weather.DEF REFL in weekend.DEF  
 ‘Luckily the weather changed during the weekend.’ [particip. NOR011]

These fronted adverbs are often followed by the element *så* ‘so’ (42.7% of the cases with an initial adverb). The resulting clauses are sometimes analysed as a left dislocation structure with *så* as a ‘proform’ in the literature. Eide (2011) analyses *så* as a clause-internal particle causing non-V2 word order in declarative main clauses. Note though that there is still subject-verb inversion in this structure.

When V3-adverbs are not placed directly before the finite verb, they are often dropped altogether; this is the case in 65.9% of the items in the “other” word order category in Table 7; cf. (34a) with the target response in (34b).

- (34) a. Bedrifta dobla omsetninga i fjor.  
 company.DEF doubled revenue.DEF last.year  
 ‘Last year, the company doubled its turnover.’ [participant NOR045]  
 b. Bedriften mer enn doblet omsetningen i fjor.  
 company.DEF more than doubled revenue.DEF last year  
 ‘Last year, the company more than doubled its turnover.’

A final noteworthy observation is that V3-word order with many of the preverbal adverbs appears optional, and not obligatory. That is, many of the items with V3-adverbs are produced with the standard main clause V2-word order and not with the expected non-V2 order (44.0 V3- vs. 41.5% V2-order; see Table 7).

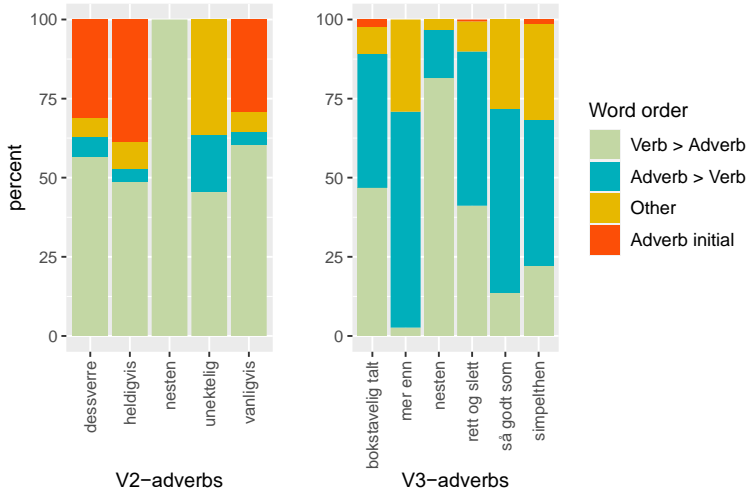


FIGURE 3: Standard V2 word order is the most frequent word order produced across the V2-adverb-subcondition. V3-adverbs are produced with V2 as well as V3 order. (V2-adverbs left to right: *unfortunately*, *fortunately*, *almost*, *undeniably*, *usually*; V3-adverbs left to right: *literally*, *more than*, *almost*, *frankly*, *as good as*, *simply*)

Plotting the results per adverb, we can see that word order preferences differs from adverb to adverb (Figure 3). The V2-adverbs *dessverre* ‘unfortunately’, *heldigvis* ‘fortunately’, and *vanligvis* ‘usually’, follow the pattern described above for this subcondition (i.e., either Verb > Adverb or initially placed adverb). *Unektelig* ‘undeniably’ seems to differ from the other V2-adverbs, but it was only included with one participant group, and we only have 11 observations with this adverb (whereas we have between 122 and 220 observations of the other adverbs). The adverb *nesten* was included both as a sentence-modifying, V2-adverb (see (35))<sup>18</sup> and a verb-modifying V3-adverb (36).

[18] An anonymous reviewer pointed out that in this sentence, *nesten* can also modify the quantifier *alt*, so that *nesten alt* is a phrase. In that case, there is no alternative position for *nesten*.

- (35) Matias fikk nesten alt rett på kjemiprøven.  
 Matias got almost everything correct on chemistry.exam.DEF  
 ‘Matias got almost everything right on the chemistry exam.’ [NOR003]
- (36) Æ nesten gråt av glede da TIL scora.  
 I almost cried of joy when TIL scored  
 ‘I almost cried tears of joy when TIL scored.’ [participant T312]

V2-*nesten* (35) is only produced with the standard V2 order. Even though verb-modifying *nesten* (36) can be placed to the left of the verb, this adverb is produced predominantly with Verb > Adverb order; see Figure 3. From Figure 3, we can also observe that V2-order is rarely used with the V3-adverb *mer enn* ‘more than’. This order is in fact infelicitous. One example with this word order is provided in (37), but note that this is probably an error (intended: ‘The company more than doubled the revenue last year.’).

- (37) Bedriften doblet mer enn omsetningen i fjor.  
 company.DEF doubled more than revenue.DEF last.year  
 ‘The company doubled more than the revenue last year.’ [part. NOR008]

Figure 3 shows that the other V3-adverbs, apart from *nesten* ‘almost’, displayed a slight preference of non-V2 Adverb > Verb order. There is variation between speakers here (some preferring V2 and some preferring V3 order), and, for some speakers, these adverbs appear to allow for word order variation, also speaker internally.<sup>19</sup>

#### [4.4] Main clause *wh*-questions

The second main clause condition in our experiments is *wh*-questions. We have a total of 1,925 observations from 85 unique speakers from Experiments 2 and 3. Two subconditions were included: the *wh*-element was either the subject (as in (38)), or the object/adjunct in the sentence (39). Additionally, the length of the *wh*-element was varied. Remember that V3-order in subject *wh*-questions occurs when the complementizer *som* is produced in the second position, or when there is lack of subject-verb inversion in non-subject *wh*-questions.

- (38) Ka som blei sagt i møtet?  
 what COMP was said in meeting.DEF  
 ‘What was said in the meeting?’ [participant KO04]

[19] *Bokstavelig talt* ‘literally’: 23/85 speakers vary between VA and AV order; *nesten* ‘almost’ (as a V3-adverb): 23/85 speakers produce both orders; *rett og slett* ‘simply’ 11/85 speakers vary; *så godt som* ‘as good as’ and *simpelthen* ‘simply’: 2 speakers vary between VA and AV.

- (39) Korleis han gjor det?  
 how he did that  
 ‘How did he do that?’ [participant NOR043]

The results for this condition are presented in Table 8. Recall from the discussion above that the possibility of non-V2 word order in main clause *wh*-questions is limited to a subset of Norwegian dialects, and the order possibilities vary within these dialects as well.

| Produced<br>word order    | Main non-subject<br><i>wh</i> -question (%) |                  | Main subject<br><i>wh</i> -question (%) |                  |
|---------------------------|---|------------------|---|------------------|
|                           | <i>short</i>                                | <i>long</i>      | <i>short</i>                            | <i>long</i>      |
| V2                        | 406 (67.2)                                  | 400 (90.9)       | 184 (41.8)                              | 279 (63.3)       |
| V3                        | 115 (19.0)                                  | 3 (0.7)          | 95 (21.6)                               | 15 (3.4)         |
| Cleft                     | 81 (13.4)                                   | 31 (7.0)         | 123 (28.0)                              | 141 (32.0)       |
| Other                     | 2 (0.3)                                     | 6 (1.4)          | 38 (8.6)                                | 6 (1.4)          |
| <b>Total observations</b> | <b>604 (100)</b>                            | <b>440 (100)</b> | <b>440 (100)</b>                        | <b>441 (100)</b> |

TABLE 8: Word order produced in main clause *wh*-question-condition, split by subconditions ±Subject and Length of *wh*-element. Percentages in brackets.

The results in Table 8 show some noteworthy patterns. Firstly, non-V2 word order in *wh*-questions is produced almost exclusively with short *wh*-words, regardless of ±subjecthood status of the *wh*-element. This pattern is not unexpected: It is known that the main pattern in Northern Norway is to allow only short, but not long, *wh*-words with non-V2 word order in subject as well as non-subject questions (Westergaard et al. 2017, Westendorp 2018). As a group, the non-Northern Norwegian speakers (N = 22) produce only 3.3% of their main clause *wh*-questions with non-V2 order. The Northern Norwegian speakers (N = 63), on the other hand, produce 15.1% of their main clause *wh*-questions with non-V2 order. Using mixed effects logistic regression, I find an effect of Northern vs. non-Northern speakers ( $\chi^2(1) = 19.22, p < .001$ ).<sup>20</sup>

Secondly, Table 8 shows that clefts are more often produced in subject than in non-subject *wh*-questions; see (40) and (41) below. As the category of non-subject questions includes questions asking for adjuncts, this difference can be explained if one considers that cleft sentences include some kind of existential presupposition that can more easily apply to an individual or a set of individuals (i.e., subjects or objects; see Büring & Križ 2013, and Hauge 2018: 74f. for

[20] By-Subcondition random intercepts were added to the standard random effects structure for this model.

Norwegian). Some of the (subject-*wh*) clefts are produced with V3-order, such as the example in (40).

(40) *Kem det va som laga maten?*  
 who it was that made food.DEF  
 ‘Who (was it that) made the food?’ [participant NOR014]

(41) *Korsn va det du gjor det?*  
 how was it you did that  
 ‘How was it that you did that?’/‘How did you do that?’ [part. KO17]

A closer look at the non-subject *wh*-questions shows that the form of the subject (i.e., pronoun or DP) also affects the proportion of non-V2-order. We set up the items so that half of the non-subject *wh*-questions starting with a short *wh*-word had a pronominal subject (e.g., *Kor du skal på ferie?* ‘Where will you go on holiday?’), whilst the other half had a proper name as the subject, e.g., *Kem Synne e ilag med?* ‘Who is Synne together with?’. However, participants quite often changed the proper name into a pronoun in their production (41/323 or 12.7% of items). 26.4% of the produced *wh*-questions with a pronominal subject had non-V2 order (N = 85/322). This number decreases notably to 10.64% non-V2 order (N = 30/282) with DP-subjects. This observation fits with the hypothesis put forth by Westergaard (2003: 92f., 2005) that the choice between V2 and non-V2 is not random, but dependent on the information structure of the subject.

#### [5] RESULTS: EFFECTS OF WRITTEN VS. SPOKEN ELICITATION MODE

In this section, I take a closer look at the effects of elicitation mode on word order. I examine the differences between the data collected with written (Experiment 2) vs. spoken elicitation (Experiment 3). 56 speakers from group C (local high school student) and group D (UiT students) participated in both experiments (6,097 observations in total).

The results from group C in the two experiments have previously been discussed in Lundquist et al. (2020). They focus not only on the syntactic variables, but also discuss the phonological and morphological variables in the data. Overall, they find a trend throughout the data that more dialectal or colloquial features are present in the spoken test (Exp. 3) compared to the written test (Exp. 2) for the local high schoolers. Still, even in the written test, standard Norwegian forms of e.g., *wh*-words are rarely produced (18% when reading the stimuli, 10% when producing the response). This suggest that most participants directly activate morphophonological forms from the local dialect even when encountering standardised orthographic forms (e.g., *ka* for the

written Bokmål *hva* ‘what’), implying that they do not treat the written and spoken language as having different grammars. The written standard forms are completely absent in the experiment that uses spoken dialect as the elicitation form. Lundquist et al. (2020) also find more dialectal/colloquial word order in the spoken elicitation experiment than in the written elicitation experiment. This effect was most clear in two subconditions: main clause non-subject *wh*-questions with short *wh*'s, and V3-adverbs. A complication for the effect of elicitation mode on the syntactic variables is that the stimuli were changed slightly between the experiments, and these changes account for some, if not most of the effect. Lundquist et al. conclude therefore that the remaining effect of elicitation method is negligible (2020: 279).

Contrary to the data from participant group C discussed in Lundquist et al. (2020), the test items used with participant group D were kept identical between the two experiments. In the following, I discuss the results from this latter group and compare them to the findings by Lundquist et al. (2020).

#### [5.1] *Syntactic reflexes of elicitation mode*

In Section 2.3 I suggested that non-V2 order in *wh*-questions, and V2 order in embedded clauses might be more accessible in a spoken register than in a written register. I will test this hypothesis in this section, starting with *wh*-questions.

Keep in mind that in most Northern Norwegian dialects, non-V2 order is only possible in questions starting with short *wh*-phrases. As we saw previously (cf. Table 8, Section 4), non-V2 word order is therefore almost completely absent in questions with long *wh*-elements. Table 9 shows the results for subject *wh*-questions for the 56 speakers that participated in both experiments split by participant group and elicitation mode. In this particular subcondition, the stimuli are the same for both groups of participants across the two elicitation modes (i.e., the two experiments 2 and 3).

The results in Table 9 show that the proportion of non-V2 order is roughly the same in the experiments/elicitation modes in both groups (C: 22.9% V3 in both experiments, D: 15.1–15.6%). The proportion of cleft constructions, however, increases noticeably in the spoken mode for both participant groups (20.8% with written stimuli, 27.1% with spoken stimuli for group C; group D: 33.3% with written stimuli, 53.1% clefts with spoken stimuli). For group D (UiT students) the increase in production of clefts in the spoken mode occurs together with a large decrease in the proportion of V2 word order. I do not have an explanation for this change, which is specific for this participant group, but priming may play a role here.

|                           | Group C (High school) |               | Group D (UiT students) |               |
|---------------------------|-----------------------|---------------|------------------------|---------------|
| <i>mode</i>               | <i>written</i>        | <i>spoken</i> | <i>written</i>         | <i>spoken</i> |
| V2                        | 49.0%                 | 47.9%         | 40.5%                  | 29.7%         |
| V3                        | 22.9%                 | 22.9%         | 15.1%                  | 15.6%         |
| Cleft                     | 20.8%                 | 27.1%         | 33.3%                  | 53.1%         |
| Other                     | 7.3%                  | 2.1%          | 11.1%                  | 1.6%          |
| <b>Total observations</b> | <b>96</b>             | <b>48</b>     | <b>126</b>             | <b>64</b>     |

TABLE 9: Proportion of word order produced in main clause subject *wh*-questions with short *wh*-elements by participant group in the written (Exp. 2) and spoken experiment (Exp. 3).

In the non-subject *wh*-question subcondition, the mean proportion of V3-order in the two groups was much greater in the spoken experiment (25.9%,  $s = 35.0$ ) as compared to the written experiment (13.8%,  $s = 23.4$ ). I plot these results in Figure 4a below. Note that the individual differences are very large as speakers differ greatly in their word order choices. However, an overall trend of more non-V2 in Experiment 3 is still visible. Lundquist et al. (2020) found an effect of experiment for group C (blue line in Fig. 4a) in this subcondition: V3 word order is about twice as common in the spoken test compared to the written test, suggesting that the written stimulus is directly responsible for the lower proportion of V3 in Experiment 2. However, as the material in the two experiments differed in several aspects, Lundquist et al. (2020: 278f.) argued that the difference between elicitation modes was likely triggered by the changes in the stimuli. The stimuli for group D (red line in Fig. 4a) were the same in both elicitation modes. Unlike group C, group D produced non-V2 order at similar rates in both experiments. This verifies the conclusion in Lundquist et al. (2020: 279) that the difference between elicitation modes for the high school cohort was likely the result of the changes made in the material, not elicitation mode.

Lundquist et al. found an effect of elicitation mode on the use of non-V2 word order in the preverbal/V3-adverb subcondition (Figure 4b). That is, they observe a significant increase in non-V2 order produced in the spoken experiment (28%–46%) (2020: 275). This effect is partly driven by the large number of dropped adverbs in the written elicitation mode, and furthermore explained by changes in the stimuli. Again, we made sure to test the same stimuli in both elicitation modes with participant group D. Both groups have a similar change in the number of non-V2 order produced across elicitation modes even when the stimuli are kept the same. Hence, this result validates the suggestion by

Lundquist et al. (2020: 275) that V3 structures are slightly more accessible in a fully spoken setting.

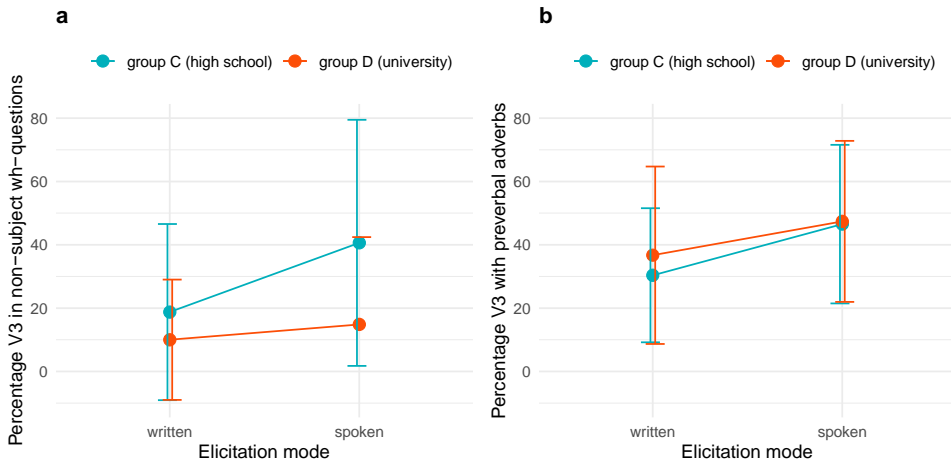


FIGURE 4: **A.** The proportion of V3-order in non-subject *wh*-questions sharply increased in the high school cohort (group C), but not in the university cohort (D) in the spoken elicitation mode. **b.** The proportion of V3-order produced in the preverbal adverb-subcondition increased in the spoken elicitation mode for both groups. Standard deviations are large as speakers greatly vary in their word order choices.

Finally, based on existing corpus research, I hypothesised that embedded V2 condition might be more accessible in a spoken register (Garbacz 2005, Jensen & Christensen 2013). Yet, elicitation mode unexpectedly seems to have the opposite effect on the proportion of embedded Verb > Adverb order produced in assertive complements. Keeping only responses to the experimental items that occurred in both Experiment 2 and Experiment 3 in this condition, I find that on average 12.5% of responses in the assertive complement subcondition were produced with EV2 in the written experiment (N = 616 total observations), whereas an average of 7.7% of the assertive complements in the spoken experiment occur with this order (N = 319 total observations). In the interrogative complements, we find an average of 3.6% V2 in Experiment 2 and no instances of V2 in the spoken elicitation. In Experiment 2, but not in Experiment 3, the participants continue to see the background sentence on the computer screen while producing their response. These background sentences will have V2, Verb > Adverb order. Priming from these background sentences is one possible explanation for the slightly higher percentages of EV2-order in the written experiment. But because of the large variation between individuals and



items, I am hesitant to draw conclusions about the effect of elicitation mode on the production of embedded V2.

[5.2] *Other positive effects of spoken elicitation*

There are more effects of using spoken dialect to elicit production data, in addition to effects on participants' word order choices. In the comparison of the results from Experiments 2 and 3, I find that participants make fewer mistakes, i.e., ungrammatical sentences and non-target like responses, when the background sentences are provided in spoken form. In the embedded *wh*-question condition, for example, there is a clear difference between the test modes in the reduction of the number of "quoted" (i.e., V2) sentences. Such V2-embedded questions are produced in Experiment 2 with a prevalence of 7.7% (65/846), compared to 3.1% (9/287) in Experiment 3. A similar effect is visible in the preverbal adverb subcondition where fewer adverbs are dropped (4.17 vs. 9.52% with written elicitation). I take these word orders (V2 in embedded questions and dropped preverbal adverbs) to be mistakes and interpret the significant difference between the elicitation modes as a clear positive effect of the spoken elicitation mode. Finally, V2-adverbs are placed in (topicalised) first position far less often in the spoken experiment (14.2% vs. 25.5% in Experiment 2).

[6] DISCUSSION

The present study has investigated patterns of variable word order in Norwegian where the verb placement does not follow the standard asymmetric V2 pattern.<sup>21</sup> I will first discuss the variable verb placement in embedded clauses, before turning to word order variation in main clauses.

The results of the three production experiments show that main clause V2 order is optionally possible in Norwegian embedded clauses alongside the standard non-V2 word order. Participants produced embedded Verb > Adverb order not only in the complements of the assertive verb *say* (11.2% V>A), but also in the complement of the factive adjective *be proud of* (4.4%), and following the interrogative verb *ask* (2.8%). There was a clear effect of clause type on the production of EV2-order in the data. I follow Julien's assertion analysis (Julien 2015, 2020) and interpret this clause type difference as the result of the speech act potential of the clause. More specifically, embedded V2 is affected by the

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[21] I use the term "asymmetric V2" here to indicate that the finite verb is obligatorily the second constituent in main clauses only (in contrast to symmetric V2 which applies more generally, in all finite clauses). An alternative term would be 'restricted' as opposed to 'general' V2 (Vikner 1995), or 'C-V2' vs. 'I-V2' (Holmberg 2015).

assertedness of the embedded clause: it is only grammatical when the embedded clause can be asserted by the actual speaker or attributed to an implicit speaker (op. cit. 2020: 275). As a result, embedded V2 is generally accessible in assertive complements, but less frequent, if not impossible, in factive or *wh*-complements. Additionally, the type of adverb also significantly impacted the production of Verb > Adverb order in all three experiments: embedded V2 was produced more often with the adverbs *ofte* ‘often’ (13.3% V>A) and *alltid* ‘always’ (10.1%) than with *aldri* ‘never’ (3.1%) and *ikke* ‘not’ (7.5%; but only tested in assertive contexts) (see also Figure 2, Section 4.1).

However, the data show a few issues that require further exploration. First, when compared to the proportion of Verb > Adverb order in Norwegian spoken corpora, where it has been established that V-Neg occurs in about a third of all clauses (Ringstad 2019), our numbers are remarkably low. The limited use of Verb > Adverb order, especially in the assertive subcondition, raises the question as to whether the contexts in our experiments are suitable for EV2. The difference between our results and the corpus findings cannot be explained by the elicitation mode alone, as the proportion of V>A order did not increase in the experiment that used spoken language to elicit responses (Exp. 3). Furthermore, results from the same experimental paradigm run on the Faroe Islands show that Faroese speakers have no issues with producing embedded V2 (EV2) in the context of our experiment. They produce V>A order in 40.7% of the assertive conditions (Westendorp 2020: 37). It is likely that Norwegian speakers require a specific pragmatic context to allow for embedded V2, and that this was not provided in the experiment. Moreover, we must consider that even when EV2 is acceptable, it is not always produced or preferred. Remarkably, the Norwegian data are also clearly different from the data from Danish and Swedish in the [Nordic Word order Database](#) (cf. Westendorp 2021: 63). Only 1.9% of the assertive complements in the Danish and 2.4% of the assertive complements in the Swedish data were produced with Verb > Adverb order. A direct comparison of the different North Germanic varieties may uncover distinctions between the EV2-systems of these varieties. One possibility is that the languages are of different EV2-types (in the sense of Gärtner 2019) with Faroese and Norwegian having a ‘broader’ EV2-type and allowing Verb > Adverb strings in more environments than the Danish and Swedish. Alternatively, the attachment or ‘height’ of the adverbs used in our experiments may differ between the languages. Further research is needed in order to answer these questions.

Second, we find that a number of participants produce embedded Verb > Adverb order in embedded interrogatives, otherwise usually considered to be an environment that blocks EV2. Here it is important to note that even though some

participants produce Verb > Adverb order in this context, the pattern is still clearly different from Icelandic where embedded Verb > Adverb order is obligatory. An apparent possibility is that the instances of Verb > Adverb in what is standardly a non-V2 context like indirect questions, might be cases of short, V-to-I-like movement. As many of our participants are from Northern Norway, the dialect area for which Bentzen (2007) argues this movement is an option, this is a possible explanation for these orders. Yet, participant's dialect background (Northern vs. non-Northern Norwegian) did not significantly affect word order choice in the embedded V2 condition,<sup>22</sup> making it less likely that the Verb > Adverb order is the result of V-to-I movement. Moreover, the production of embedded V>A order declines across clause types in the same way in both groups (i.e., most V>A in assertive contexts, least V>A in interrogative complements). In further research, the claim that all embedded V>A is the result of V-to-C could be tested further by including not only subject-initial clauses, but also non-subject initial clauses (where V>A order is *bona fide* V-to-C). A closer look at the responses of different Northern Norwegian participants might also yield additional interesting results, as Bentzen (2007: 130-2) pointed out that the Tromsø dialect and other regional Northern Norwegian varieties differ in the degree to which they allow embedded verbs to precede adverbs. Previous research on Northern Norwegian (as well as Faroese) on possibilities for V-to-I movement are also argued to depend on the finiteness of the verb and whether the verb is an auxiliary or a main verb. These more fine-grained distinctions were outside the scope of the current experiments but might be worth exploring in future research.

Finally, I turn to the observation that the production of embedded V2 is not only dependent on clause type but also on the type of adverb: the percentage of Verb > Adverb order produced was much higher in experimental items with *ofte* 'often' and *alltid* 'always', than with *aldri* 'never' (and the negation *ikke*). In Section 4.1 I discussed how right dislocation of *ofte* (in clause final position) could yield cases of Verb > Adverb string without any verb movement. Crucially, *ofte* is the only adverb in the experiment which has the possibility of clause-final placement. However, the difference between the adverb types persisted also when we include only clauses with clear clause-medial placement of the adverb (as controlled for by including an object following the adverb). There are a few possible explanations for the observed difference in the use of Verb > Adverb order with *often* and *always* vs. *never* and *not*.

Our data show a pattern with regard to verb movement across different adverbs that is reminiscent of observations in Faroese, Northern Norwegian, and

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[22] For Northern vs. non-Northern Norwegian participants:  $\chi^2(1) = 0.62, p = .433$ .

Kronoby Swedish data in previous research (cf. Section 2.1). Note though that in these earlier analyses, the adverb *always* was categorised as an adverb that restricted verb movement, contrary to *often*. In the results of the present study, however, *always* and *often* group together. The analyses of the Faroese (Bentzen et al. 2009), Northern Norwegian (Bentzen 2005, 2007), and Kronoby Swedish data (Wiklund et al. 2007) all draw on Cinque's (1999) adverb hierarchy to describe how high the verb has moved within a sequence of functional heads. Crucially, both *often* and *always* are assumed to be positioned in the middle of Cinque's hierarchy, but *always* is placed slightly lower.

Blocking of V>A with *always* but not with *often*, has previously been an issue in the analysis of Faroese verb movement (Bentzen et al. 2009: 98) when, on the assumption that the order Verb > *often* is derived by verb movement up to a certain point, one would need to account for why this type of movement is blocked across an adverb lower in the structure (i.e., *always*). The Norwegian data in the present study does not have this issue: Verb > Adverb order is produced to a similar degree with both *often* and *always* in contrast to *not* and *never*.

If we do not assume a strict linking of adverb classes and functional categories, one can adopt an account where adverb placement is driven by interpretational distinctions between classes of adverbs (see e.g., Jackendoff 1972, Svenonius 2001). For our data we might split the adverbs into TP-adverbials (i.e., *ikke* 'not' and *aldri* 'never') which takes scope over the entire proposition, and adverbials that can optionally modify the verbal predicate alone (i.e., *alltid* 'always' and *ofte* 'often'). Assuming that such low adverbs adjoin to or inside VP, Verb > Adverb order with these adverbs could be the result of short verb movement that does not target C, but rather I (cf. Pollock 1989). As a result, there is an additional possible derivation for the word order with these adverbs. Whereas for TP-adverbs, a V-to-C derivation would be the only way of getting Verb > Adverb order. This would account for a higher percentage of Verb > Adverb order produced with *alltid* and *ofte*. Both of these accounts of verb placement variation with different adverbs assume that at least some cases of Verb > Adverb order are instances of short verb movement, an analysis for which I have argued that there is no clear indication in the data. Alternatively, the adverbs *often* and *always* in Norwegian might optionally be low in the structure and modify the VP. In this position, they are simply lower than the verb in its base position (though importantly not right dislocated).

We might also consider the possibility that the two sets of adverbs do not differ in their abilities to move up the structure, but rather that there is an additional derivation for the Verb > Adverb string with *often* and *always* attach lower inside a layered vP/VP, as in (42):

42. [CP ... [IP sub I<sup>0</sup> [VP t<sub>sub</sub> V<sub>fin</sub> [VP adv [VP ... t<sub>V</sub> ...

This is the analysis that Koenenman & Zeijlstra (2014) pose for Northern Norwegian and Kronoby Swedish, as an alternative to optional V-to-I movement.<sup>23</sup>

Finally, another potential explanation is the adverbs that are less compatible with Verb > Adv/Neg order have some property in common that interferes with verb movement. One could for example argue that negation and the adverb *never* share some sort of negativity feature and explore how this feature would somehow restrict verb movement. More research is needed to find out which explanation is best at accounting for the data.

Turning now to main clauses, we find deviations from the standard V2 word order in *wh*-questions and in sentences with V3-adverbs. Non-V2 word order was produced almost exclusively in *wh*-questions starting with short *wh*-elements. This has previously been described as the usual pattern in many Northern Norwegian dialects (e.g., Elstad 1982, Vangsnes & Westergaard 2014, Westergaard et al. 2017, Westendorp 2018). I also find that V3-word order is optional, not obligatory, with many of the preverbal adverbs; even though the non-V2 order with preverbal adverbs is acceptable, speakers still often produce the standard V2 word order.

Interestingly, comparing the Norwegian results for the V3-adverb subcondition with the results from Danish in the Nordic Word order Database, it can be observed that the Norwegian speakers produce non-V2 word order about three times as often as Danish speakers (cf. Westendorp 2021: 65). One might be inclined to think that the likelihood of producing non-V2 word order with V3-adverbs is higher for Norwegian speakers because they can also activate non-V2 structures in other domains (e.g., *wh*-questions). However, Lundquist et al. (2020: 276) find that there is no correlation between the production of non-V2 structures in different clause types in Norwegian. Instead, it seems likely that the distributional difference between Norwegian and Danish non-V2 main clause word order with these adverbs is largely the result of the properties of the specific lexical elements used in the experiment. Moreover, the non-V2 sentences with V3-adverbs are structurally different from the non-V2 structures in *wh*-questions: the verb still moves to the V2-position C in the former, but not in the latter structure. Norwegian speakers seem to have little problem keeping several non-V2 constructions in their grammar while maintaining the verb second generalization. In other words, the non-V2 constructions (though they

[23] Falk (1993: 171-72) provides a similar analysis for Old Swedish where she argues that adverbs differ from negation in allowing lower attachment inside VP. See also Nilsen (2003: 29-30) for a similar analysis VP-scrambling around left-adjoined low adverbs.

are structurally different) do not seem to work in tandem to erode the V2 system.

In addition to some interesting syntactic results in our data to follow up on, there are other possible venues for future research. The collected (audio) data from this study, as well as the other data collected in the [Nordic Word order Database](#) project, may be used for other purposes than examining syntactic variation. In this respect, it would be interesting to take a closer look at (morpho)phonological and morphological variation between the data from Experiment 2 and 3 (written vs. spoken elicitation) with the group tested at UiT in 2020. A more in-depth look at any prosodic reflexes of the word order choices is already planned. Furthermore, because the data was collected using controlled sampling methods, it will also allow us to address questions about processing and production difficulties linked to atypical word order in the future.

#### [7] CONCLUDING REMARKS AND OPEN QUESTIONS

In an asymmetric V2-language like Norwegian, the root property of the clause ( $\pm$ main) is undoubtedly the strongest determiner of finite verb placement. Yet, Norwegian displays a rich array of variation when it comes to the position of the finite verb, both in main and in embedded clauses. The present study has provided an overview of this variation using controlled experimental data. Although  $\pm$ main is still the biggest predictor of word order, the results in this study show that the V2 system is more flexible in certain environments.

I have suggested that the assertion analysis of declarative V2 proposed by Julien (2015, 2020) can be used to account for the word order optionality in not only embedded, but also in main clauses. Abstracting away from the word order distribution in sentences with V2/V3-adverbs, which is specific to these lexical items; the percentage of V2 word order produced in both main and embedded clauses increases when the clause is assertive (and vice-versa). That is, in embedded clauses, assertive verb complements have a higher percentage of V2 than embedded questions. Mirroring this, Norwegian main clause declaratives are always V2 (Lundquist & Tengesdal 2021) (except of course for V3-adverbs), while word order is variable in *wh*-questions. I propose that it is *wh*-questions specifically that allow for optional non-V2 word order, as these constructions are non-assertive. The same is the case for imperatives which allow variation between Neg > Imp and Imp > Neg in Norwegian (imperatives were not included in the present study, but see Garbacz & Johannessen (2014) for a discussion of the word order possibilities). It is important to note that non-V2 order in embedded clauses and V2 word order in main clauses is of course always possible. Furthermore, the semantic difference between EV2 and non-V2, and V2/non-V2 in *wh*-questions is, if anything, very subtle.

In conclusion, the dichotomy between main and embedded clauses in the asymmetric V2-system breaks down in various ways in Norwegian. Instead of a system based solely on the root properties of the clause ( $\pm$ main/root), word order in Norwegian is more flexible and involves an interplay of pragmatic factors such as assertion or speech act potential, and properties of different adverbs (especially the adverb *ofte* ‘often’), resulting in a more gradient distribution of V2/non-V2 word order across both main and embedded clauses. This is summarised in Figure 5: when embedded clauses are assertive, they optionally have V2-word order. By contrast, when main clauses are not assertive, i.e., in *wh*-questions, V2 is no longer obligatory in Norwegian.

|             | + MAIN  | - MAIN  |
|-------------|---|---|
| + ASSERTIVE | V2 order<br>(declaratives)  | <b>variable word order</b><br>(assertive verb<br>complements) |
| - ASSERTIVE | <b>variable word order</b><br>( <i>wh</i> -questions,<br>imperatives) | non-V2 order<br>(emb. questions)                              |

FIGURE 5: Effect of interplay between  $\pm$ assertiveness and  $\pm$ main clause on word order possibilities in Norwegian.

Following this reasoning, supported by the results of our set of experiments, the idea that V2 word order is the result of one unified property or phenomenon must be abandoned. This is in line with much of the discussion in recent literature challenging the idea of the verb second property uniformly manifests V-to-C movement (see e.g., Lohndal et al. 2020).

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#### REFERENCES

- Andersson, Lars-Gunnar. 1975. *Form and function of subordinate clauses*. Doctoral dissertation, University of Gothenburg.
- Baayen, R.H., D.J. Davidson, & D.M. Bates. 2008. [Mixed-effects modeling with crossed random effects for subjects and items](#). *Journal of Memory and Language* 59(4), 390–412.
- Bates, Douglas, Martin Maechler, Ben Bolker & Steve Walker. 2015. [Fitting Linear Mixed-Effects Models Using lme4](#). *Journal of Statistical Software* 67(1). 1–48. R package version 1.1.27.
- Bentzen, Kristine. 2003. [V-to-I Movement in the Absence of Morphological Cues: Evidence from Adult and Child Northern Norwegian](#). *Nordlyd. Proceedings of the 19th Scandinavian Conference of Linguistics: Acquisition* 31(3). 573–588.
- Bentzen, Kristine. 2005. [What’s the better move? On verb placement in Standard and Northern Norwegian](#). *Nordic Journal of Linguistics* 28(2). 153–188.
- Bentzen, Kristine. 2007. [The degree of verb movement in embedded clauses in three varieties of Norwegian](#). *Nordlyd* 34. 127–146.
- Bentzen, Kristine, Piotr Garbacz, Caroline Heycock & Gunnar Hrafn Hrafnbjargarson. 2009. [On variation in Faroese verb placement](#). *Nordlyd* 36(2): NORMS Papers on Faroese. 78–102.
- Besten, Hans den. 1973. On the interaction of root transformations and lexical deletive rules. In Werner Abraham (ed.), *On the Formal Syntax of the Westgermania*, 47–131. John Benjamins.
- Brandtler, Johan & David Håkansson. 2017. [V2 eller V3? Om preverbal placering av adverbial i svenskan](#). *Norsk Lingvistisk Tidsskrift* 35. 11–26.
- Büring, D. & M. Križ. 2013. [It’s that and that’s it! Exhaustivity and homogeneity presuppositions in clefts \(and definites\)](#). *Semantics and Pragmatics* 6(6). 1–29.



- Cinque, Guglielmo. 1999. *Adverbs and Functional Heads: A Cross-linguistic Perspective*. Oxford University Press.
- Cornips, Leonie & Willy Jongenburger. 2001. Elicitation techniques in a Dutch syntactic dialect atlas project. In Hans Broekhuis & Ton van der Wouden (eds.), *Linguistics in The Netherlands* 18, 55–63. John Benjamins.
- Cornips, Leonie & Cecilia Poletto. 2005. On standardizing syntactic elicitation techniques (part 1). *Lingua* 115. 939–957.
- Eide, Kristin Melum. 2011. [Norwegian \(non-V2\) declaratives, resumptive elements, and the Wackernagel position](#). *Nordic Journal of Linguistics* 34(2). 179–213.
- Elstad, Kåre 1982. Nordnorske dialektar. In Tove Bull & Kjellaug Jetne (eds.), *Nordnorsk. Språkav og språkforhold i Nord-Noreg*, 11–100. Samlaget.
- Falk, Cecilia. 1993. *Non-referential Subjects in the History of Swedish*. Doctoral dissertation, Lund University.
- Garbacz, Piotr. 2005. *Bisatsstrukturer som “man kan inte” bortse frå (om bisatsorfølj i de fastlandsskandinaviske språken)*. Ms. Lund University.
- Garbacz, Piotr & Janne Bondi Johannessen. 2014. [Negation in imperative clauses](#). *Nordic Atlas of Language Structures (NALS) Journal* 1. 250–265.
- Gärtner, Hans-Martin. 2019. [On the Rich Agreement Hypothesis and varieties of embedded V2](#). *Nordic Journal of Linguistics* 42(2). 209–225.
- Hauge, Anne Helene. 2018. *Clefts in Norwegian wh-questions: their use and meaning*. Master thesis, University of Oslo.
- Holmberg, Anders. 1986. *Word order and syntactic features in the Scandinavian languages and English*. Stockholm: Stockholm University dissertation.
- Holmberg, Anders. 2015. Verb second. In Tibor Kiss & Artemis Alexiadou (eds.), *Syntax – Theory and analysis: An international handbook*, 2nd edn., 342–382. Berlin: de Gruyter.
- Holmberg, Anders. 2020. On the bottleneck hypothesis of Verb Second in Swedish. In Sam Wolfe & Rebecca Woods (eds.), *Rethinking Verb Second*, chap. 33, 40–60. Oxford University Press.
- Holmberg, Anders & Christer Platzack. 1995. *The Role of Inflection in Scandinavian*

- Syntax*. Oxford University Press.
- Heycock, Caroline & John D. Sundquist. 2017. [Don't Rush to Rehabilitate: A Remark on Koeneman and Zeijlstra 2014](#). *Linguistic Inquiry* 48(1). 173–179.
- Hooper, Joan B. & Sandra Thompson. 1973. On the applicability of root transformations. *Linguistic Inquiry* 44(4). 465–497.
- Jackendoff, Ray. 1972. *Semantic interpretation in Generative Grammar*. Current Studies in Linguistics Series. MIT Press.
- Jensen, Torben Juel & Tanya Karoli Christensen. 2013. [Promoting the demoted: The distribution and semantics of “main clause word order” in spoken Danish complement clauses](#). *Lingua* 137. 38–58.
- Julien, Marit. 2007. [Embedded V2 in Norwegian and Swedish](#). *Working Papers in Scandinavian Syntax* 80. 103–161.
- Julien, Marit. 2015. [The force of V2 revisited](#). *Journal of Comparative Germanic Linguistics* 18. 139–181.
- Julien, Marit. 2018. [Om preverbale adverbialer](#). *Norsk lingvistisk tidsskrift* 36. 161–178.
- Julien, Marit. 2020. The assertion analysis of declarative Verb Second. In Sam Wolfe & Rebecca Woods (eds.), *Rethinking Verb Second*, chap. 12, 265–280. Oxford University Press.
- Koeneman, Olaf & Hedde Zeijlstra 2014. The Rich Agreement Hypothesis rehabilitated. *Linguistic Inquiry* 45. 571–615.
- Lohndal, Terje, Marit Westergaard & Øystein A. Vangsnes. 2020. V2 in Norwegian: variation and acquisition. In Sam Wolfe & Rebecca Woods (eds.), *Rethinking Verb Second*, chap. 33, 770–789. Oxford University Press.
- Lundquist, Björn. 2018. [Mer om de preverbala adverbialens syntax, semantik och prosodi](#). *Norsk Lingvistisk Tidsskrift* 36. 179–195.
- Lundquist, Björn, Ida Larsson, Maud Westendorp, Eirik Tengedal & Anders Nøklestad. 2019. [Nordic Word Order Database: Motivations, methods, material and infrastructure](#). *Nordic Atlas of Language Structures (NALS) Journal* 4(1). 1–33.
- Lundquist, Björn & Eirik Tengedal. 2021. Argument placement in Norwegian.

Ms. UiT/UiO.

- Lundquist, Björn & Maud Westendorp. 2020, October 15–16. *Object shift feeds variable verb and subject placement: implications for linearization and production planning* [Conference presentation]. Linearising Constituents Across Domains, Bled, Slovenia.
- Lundquist, Björn, Maud Westendorp & Bror-Magnus S. Strand. 2020. *Code-switching alone cannot explain intraspeaker syntactic variability – evidence from a spoken elicitation experiment*. *Nordic Journal of Linguistics* 43(3). 249–287.
- Mathôt, Sebastiaan, Daniel Schreij & Jan Theeuwes. 2012. *OpenSesame: An open-source, graphical experiment builder for the social sciences*. *Behavior Research Methods* 44(2). 314–324.
- Mæhlum, Brit. 2009. Standardtalemål? Naturligvis! En argumentasjon for eksistensen av et norsk standardtalemål. *Norsk Lingvistisk Tidsskrift* 27(1). 7–26.
- Mæhlum, Brit & Unn Røyneland. 2012. *Det norske dialektlandskapet*. Cappelen Damm Akademisk.
- Nilsen, Øystein. 2003. *Eliminating Positions: Syntax and Semantics of Sentential Modification*. Doctoral dissertation, Utrecht University.
- Nordic Word order Database* [Dataset]. University of Oslo: the Text Laboratory. <https://tekstlab.uio.no/nwd>
- Pollock, Jean-Yves. 1989. Verb movement, universal grammar, and the structure of IP. *Linguistic Inquiry* 20(3). 365–424.
- R Core Team. 2020. *R: A language and environment for statistical computing*. R Foundation for Statistical Computing, Vienna, Austria. Version 4.0.3.
- Ringstad, Tina Louise. 2019. *Distribution and function of embedded V–Neg in Norwegian: A corpus study*. *Nordic Journal of Linguistics* 42. 329–363.
- Sandøy, Helge. 2009. Standardtalemål? Ja, men ...! Ein definisjon og ei drøfting av begrepet. *Norsk Lingvistisk Tidsskrift* 27(1). 27–47.
- Sandøy, Helge. 2011. Language culture in Norway: A tradition of questioning standard language norms. In Tore Kristiansen & Nikolas Coupland (eds.), *Standard Languages and Language Standards in a Changing Europe*, 119–126.

- Novus Forlag.
- Singmann, Henrik, Ben Bolker, Jake Westfall, Frederik Aust & Mattan S. Ben-Shachar 2021. *afex: Analysis of Factorial Experiments*. R package version 0.28.1.
- Stroh-Wollin, Ulla. 2002. *Som-satser med och utan som*. Uppsala University dissertation.
- Språkrådet. 2017, February. *Sterk språkinteresse blant nordmenn* [Strong language interest among Norwegians]. <https://www.sprakradet.no/Vi-og-vart/hva-skjer/Aktuelt/2017/sterk-sprakinteresse-blant-nordmenn/> (Accessed 20 October 2020).
- Svenonius, Peter. 2002. Subject positions and the placement of adverbials. In Peter Svenonius (ed.), *Subjects, Expletives, and the EPP*, 201–242. Oxford University Press.
- Vangsnes, Øystein A. 2005. *Microparameters for Norwegian wh-grammars*. *Linguistic Variation Yearbook* 5. 187–226.
- Vangsnes, Øystein A. 2019. Dialekt i sosiale medium – det norske perspektivet. *Språk i Norden* 49(1). 94–109.
- Vangsnes, Øystein A. & Marit Westergaard. 2014. Ka korpuset fortæll? Om ordstilling i hv-spørsmål i norske dialekter. In Janne Bondi Johannessen & Kristin Hagen (eds.), *Språk i Norge og nabolanda. Ny forskning om talespråk*, 133–151. Novus Forlag.
- Vikner, Sten. 1995. *Verb movement and expletive subjects in the Germanic languages*. Oxford University Press.
- Vikør, Lars. 1993. *The Nordic Languages: Their status and interrelations*. Novus.
- Westendorp, Maud. 2018. *New methodologies in the Nordic Syntax Database: Word order variation in Norwegian wh-questions*. *Nordic Atlas of Language Structures (NALS) Journal* 3. 1–18.
- Westendorp, Maud. 2020. *Verb placement in embedded sentences in Faroese*. *Nordic Atlas of Language Structures (NALS) Journal* 5(1). 28–42.
- Westendorp, Maud. 2021. *Verb placement variation in Swedish and Danish*. *Nordic Atlas of Language Structures (NALS) Journal* 6(1). 49–72.

- Westendorp, Maud & Björn Lundquist. 2021, February 23–26. *The presence of light objects affects variable verb and subject placement in North Germanic* [Conference presentation]. Jahrestagung der DGfS "Modell und Evidenz", Universität Freiburg im Breisgau.
- Westergaard, Marit. 2003. [Word order in wh-questions in a North Norwegian dialect: some evidence from an acquisition study](#). *Nordic Journal of Linguistics* 26(1). 81–109.
- Westergaard, Marit. 2005. [Optional word order in wh-questions in two Norwegian dialects: a diachronic analysis of synchronic variation](#). *Nordic Journal of Linguistics* 28(2). 269–296.
- Westergaard, Marit, Øystein A. Vangsnes & Terje Lohndal. 2017. [Variation and change in Norwegian wh-questions: The role of the complementizer som](#). *Linguistic Variation* 17(1). 8–43.
- Wickham et al. 2019. [Welcome to the tidyverse](#). *Journal of Open Source Software* 4(43), 1686. 1–6. R package version 1.3.0.
- Wiklund, Anna-Lena, Gunnar Hrafn Hrafnbjargarson, Kristine Bentzen & Þorbjörg Hróarsdóttir. 2007. [Rethinking Scandinavian verb movement](#). *Journal of Comparative Germanic Linguistics* 10. 203–233.
- Wiklund, Anna-Lena, Kristine Bentzen, Gunnar Hrafn Hrafnbjargarson & Þorbjörg Hróarsdóttir. 2009. [On the distribution and illocution of V2 in Scandinavian that-clauses](#). *Lingua* 119(12). 1914–1938.
- Wittenburg, Peter, Hennie Brugman, Albert Russel, Alex Klassmann & Han Sloetjes. 2006. ELAN: a Professional Framework for Multimodality Research. In Nicoletta Calzolari, Khalid Choukri et al. (eds.), *Proceedings of LREC 2006, Fifth International Conference on Language Resources and Evaluation*, 1556–1559. European Language Resources Association (ELRA).

## APPENDIX 1: DESIGN OF THE THREE EXPERIMENTS

The method of this study was developed successively, and conditions and items were added, changed, or removed in the different versions (cf. Table 1, Section 3). The build-up of the original experiment (Exp. 1) was as follows:

| Part/Task           | Embedded V2   | Embedded <i>wh</i> -questions                | True fillers               |
|---------------------|---|--|----------------------------|
| 1. main-to-Embedded | 6 assertive context<br>6 factive context<br>6 ind. Question | 6 subject <i>wh</i><br>6 non-subj. <i>wh</i> | 6 assertive without adverb |
| 2. main-to-Embedded | 6 assertive context<br>6 factive context<br>6 ind. Question | 6 subject <i>wh</i><br>6 non-subj. <i>wh</i> | 6 assertive without adverb |

TABLE A1: Build-up of Experiment 1 testing embedded clauses only.

Experiments 2 and 3 included both main and embedded clauses and accordingly two different transformations. Additional changes to these experiments were made for testing at the local high school (group C) because of time restrictions: several embedded V2 items and embedded *wh*-questions were cut, and the number of fillers limited.

| Part/Task           | Embedded V2                                  | Embedded <i>wh</i> -questions                | V2 & V3 adverbs      | Main clause <i>wh</i> -questions             | Decl. fillers |
|---------------------|--|--|----------------------|--|---------------|
| 1. main-to-embedded | 12 assertive<br>4 factive<br>4 ind. question | 5 subject <i>wh</i><br>7 non-subj. <i>wh</i> |                      |  | 8             |
| 2. embedded-to-main |  |  | 8 V2-adv<br>8 V3-adv | 8 subject <i>wh</i><br>8 non-subj. <i>wh</i> | 8             |

TABLE A2: Build-up of Experiment 2 testing word order in embedded clauses (part 1) and main clauses (part 2).

Experiment 3 focused more on the subconditions in which we observed most variation (e.g., V3-adverbs). Items testing verb movement in factive complements (*proud of ...*) were removed to simplify the first part/task of the experiment, so that it included only one, not two types of declaratives (as well as interrogatives). Finally, a few of the participants commented on the V3-adverb

*simpelthen* ‘simply’ used Experiment 2. Some did not know the word or said they would never use it. We replaced it with *rett og slett* ‘simply’.

| Part/Task           | Embedded V2                      | Embedded <i>wh</i> -questions                | V2 and V3 adverbs     | Main clause <i>wh</i> -questions               | True fillers   |
|---------------------|----------------------------------|--|-----------------------|--|----------------|
| 1. main-to-embedded | 14 assertive<br>6 ind. questions | 4 subject <i>wh</i><br>6 non-subj. <i>wh</i> |                       |  | 8 decl.<br>2 Q |
| 2. embedded-to-main |                                  |  | 6 V2-adv<br>12 V3-adv | 10 subject <i>wh</i><br>10 non-subj. <i>wh</i> | 2 decl.        |

TABLE A3: Build-up of Experiment 3 testing word order in embedded clauses (part 1) and main clauses (part 2).

APPENDIX 2: OVERVIEW ITEMS IN EV2-CONDITION WITH ADVERB *OFTE*.

| SentenceID | Background sentence   | Ambiguous/<br>removed | # of data<br>points |
|------------|---|-----------------------|---------------------|
| assertive1 | <i>Jeg setter meg ofte lengst bak i bussen.</i><br>'I often sit (down) in the back of the bus.'           | no                    | 152                 |
| assertive2 | <i>Jeg setter meg ofte fremst på forelesninga.</i><br>'I often sit (down) in the front during a lecture.' | no                    | 101                 |
| assertive3 | <i>Jeg kjører ofte bil til jobb.</i><br>'I often drive (my car) to work.'                                 | no                    | 151                 |
| assertive4 | <i>Jeg hører ofte på radio i bilen.</i><br>'I often listen to the radio in the car.'                      | no                    | 11                  |
| assertive5 | <i>Jeg legger meg ofte innen midnatt.</i><br>'I often go to bed (lit. lay myself down) before midnight.'  | yes                   | 32                  |
| factive1   | <i>Jeg får ofte alt rett på prøver.</i><br>'I often get everything right on exams.'                       | no                    | 32                  |
| factive2   | <i>Jeg legger meg ofte innen midnatt.</i><br>'I often go to bed (lit. lay myself down) before midnight.'  | yes                   | 123                 |
| embq1      | <i>Snør det ofte i Tromsø?</i><br>'Does it often snow in Tromsø?'   | yes                   | 69                  |
| embq2      | <i>Føler Pål seg ofte alene på skolen?</i><br>'Does Pål often feel lonely at school?'                     | no                    | 32                  |
| embq3      | <i>Kommer Marit ofte for sent på skolen?</i><br>'Is Marit often late for school?'                         | no                    | 32                  |
| embq4      | <i>Regner det ofte i Bergen/Island?</i><br>'Does is often rain in Bergen?'                                | yes                   | 61                  |

TABLE A4: Overview items in embedded V2 condition with *ofte*.

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