UiT The Arctic University of Norway

Faculty of Humanities, Social Sciences and Education

The distribution of main and embedded structures

V2 and non-V2 orders in North Germanic

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Preface

This dissertation is submitted in partial fulfilment of the requirements for the degree of *Philosophiae Doctor* at UiT The Arctic University of Norway. The research presented here was conducted at the Center for Advanced Study in Theoretical Linguistics – Formal Investigations into Structure and Hierarchy (CASTLFish), UiT The Arctic University of Norway, under the supervision of professor Øystein A. Vangsnes and associate professor Björn Lundquist.

The dissertation is a collection of four papers. The papers are preceded by a general introduction that relates the articles to each other and provides background information and motivation for the work. I am the sole author of the first two papers, the other two papers are joint work.

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List of abbreviations

def	definite
indef	indefinite
imp	imperative
inf	infinitive
ING	Insular North Germanic
IS	Information Structure
MNG	Mainland North Germanic
NG	North Germanic
OT	Optimality Theory
perf	perfect
pl	plural
prs	present
pst	past
refl	reflexive
sg	singular
V2	Verb Second

List of Papers

Paper I

Westendorp, Maud "Variable Verb Second in Norwegian main and embedded clauses". To appear in: *Nordic Atlas of Language Structures (NALS) Journal*. Vol. 6, no. 1 (2021).

Paper II

Westendorp, Maud "Word order variation in Norwegian wh-questions". In: *Nordic Atlas of Language Structures (NALS) Journal*. Vol. 3, no. 1 (2018), pp. 1–18. DOI: 10.5617/nals.6533.

Paper III

Lundquist, Björn, Maud Westendorp and Bror-Magnus S. Strand "Code-switching alone cannot explain intraspeaker syntactic variability". In: *Nordic Journal of Linguistics*. Vol. 43, (2020), pp. 249–287. DOI: 10.1017/S0332586520000190.

Paper IV

Westendorp, Maud and Björn Lundquist "Unstable verb placement and the North Germanic CP". *Submitted for publication.*

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Chapter 1

General introduction of the thesis

This dissertation is divided into two parts: a general introduction and a collection of four articles. The overarching theme of the dissertation is the distribution of main and embedded structures in modern North Germanic. North Germanic, often referred to as Scandinavian, is a branch of the Germanic language family and consists of the closely related languages Danish, Faroese, Icelandic, Norwegian, and Swedish.

In North Germanic, the finite verb in main clauses is typically found in the second position of the clause as in the Norwegian example in (1). In embedded clauses, the finite verb is usually in a position further to the right, together with any non-finite verbs, see (2).

(1) Tidligere ha-dde Sofie aldri ville-t spise fisk.
earlier had-PST Sofie never wanted-PERF eat.INF fish
'She had never wanted to eat fish before.

(2) Sofie sa [at hun aldri had-dde ville-t spise fisk].
Sofie said that she never had-PST wanted-PERF eat.INF fish
'Sofie said that she had never wanted to eat fish.'

In this dissertation I study variation in the placement of the finite verb in main and embedded clauses in Danish, Faroese, Norwegian and Swedish. [1] I will not present any new data from Icelandic but will discuss verb placement variation in Icelandic in relation to the other languages at various points. The motivation for this line of inquiry begins with the observation that many varieties of North Germanic allow variation in the positioning of the finite verb, in main as well as embedded clauses. In (3–6) below, I present some 'minimal pairs' of this word order variation, where both variants are accepted by the same speaker (intraspeaker variation). The (a)-examples show the standard, most frequently used, word order; the (b)-examples all deviate from this standard pattern.

(3) *Verb placement variation in main clause non-subject wh-questions*

a. Ka sa du?
what say.PST you

b. Ka du sa?
what you say.PST

'What did you say?' [Norwegian]

[1] References to 'Norwegian', 'Swedish' etc. in the text are to the standard varieties of these languages, unless specified otherwise.

(4) *Verb placement variation in main clause subject wh-questions*

a. Kem komme-r?
who come-PRS

b. Kem som komme-r?
who COMP come-PRS
'Who is coming?' [Norwegian]

(5) *Optional placement of adverbs in clause-second position*

a. Jeg græd næsten af glæde da Danmark score-de.
I cry.PST almost of joy when Denmark score-PST

b. Jeg næsten græd af glæde da Danmark score-de.
I almost cry.PST of joy when Denmark score-PST
'I almost cried from joy when Denmark scored.' [Danish]

(6) *Verb placement variation in (assertive) embedded clauses*

a. Kalle sa att han ofta sätte-r sig bak i bus-sen.
Kalle say.PST that he often sit-PRS REFL back in bus-DEF

b. Kalle sa att han sätter sig ofta bak i bussen.
Kalle say.PST that he sit-PRS REFL often back in bus-DEF
'Kalle says he often sits at the back of the bus.' [Swedish]

The interesting thing about these variable patterns is that the function of the variation is not clear. Typically, when we say something in a different way, we mean something different. For the patterns above, there is no clear motivation for using one word order over the other. Furthermore, the position of the verb in declarative main and embedded clauses in North Germanic is usually quite strict, as in (1) and (2). In fact, in all the Germanic languages except for Modern English, the finite verb is obligatorily in the second position in declarative main clauses, but not in embedded clauses. The patterns in (3–6) are therefore remarkable deviations in an otherwise rigid system. Finally, few studies have accounted for deviations from the standard verb placement patterns in main and embedded clauses under a unified analysis.

Following generative theoretical assumptions, I take the base position of the finite verb in North Germanic to be to the right of any sentence adverb and the object. In main clauses such as (1), the finite verb moves from its base position to a higher position in the clause. Subsequently, some other constituent moves to the clause-initial position. This phenomenon is called Verb Second (V2). All the North Germanic languages are considered Verb Second languages. The Verb Second property is among the best-studied properties within formal linguistics, yet new data and insights continue to challenge the classical accounts of V2. This dissertation aims to contribute to that discussion.

The main focus of my study is the status of the variable word orders in (3–6). The (a)-examples show the standard V2 placement of the verb in main clauses (3–5), and the lack of such placement in the embedded clause in (6a). The (b)-sentences all show possible deviations from this V2 pattern. These variable patterns lead me to ask the following research questions: What alternations from

Verb Second are possible across varieties of North Germanic? What governs these variable patterns? How do speakers decide between word orders? How can we best account for this variation within the grammar? And how do these variable patterns fit into our understanding of the Verb Second property? I explore these questions in this dissertation by presenting new experimental results from Norwegian, Danish, Swedish and Faroese in four self-contained articles.

This general introduction is organised as follows: Chapter 1 presents the theoretical framework in which the articles are written. The subsequent background chapters provide a general overview of the Verb Second phenomenon (Chapter 3), verb placement in North Germanic (Chapter 4), and a review of potential sources of variation, factors that may influence word order and ways the literature has dealt with syntactic variation (Chapter 5). Chapter 6 presents the research questions, goals, and the methodology of the dissertation. I provide a summary of the results from the four articles in Chapter 7. The implications of these results are discussed in the final chapter.

Chapter 2

Preliminaries

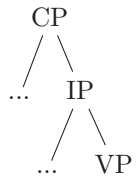
2.1 Theoretical assumptions

Most of the theoretical linguistic research on the V2 property has been conducted within the generative Principles and Parameters (P&P) framework, its formal precursors, and developments thereon (Woods & Wolfe 2020). The work in this dissertation is written within a similar minimalist P&P approach. The framework I use is relatively conservative from a minimalist point of view. Such an older analytical approach simply suffices for my purposes. Furthermore, most of the standard analyses of North Germanic word order, as well as those of the Verb Second phenomenon, were developed within a late Government and Binding Theory/Early Minimalist Program. In the following, I outline a few of the basic theoretical assumptions on which my work builds.

2.2 Clause structure and movement

Firstly, I assume a simple clause structure with three structural layers: the complementizer phrase CP (often referred to as the 'Left Periphery'), the inflectional phrase IP and the verb phrase VP. This structure is widely used since Chomsky's Barriers (1986)[1] and shown in (1).

(1)

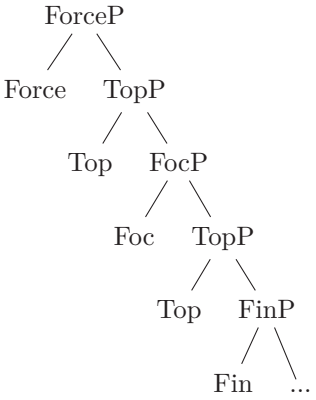


It has been argued, on the basis of conclusive syntactic research, that these layers need to be split into several such functional projections (Pollock 1989, Rizzi 1997, Cinque 1999). I refer to these extensions in the argumentation in **Paper I** and **IV**. An extension of the CP-structure was proposed by Rizzi (1997). Rizzi conceptualises the C-domain as being made up of layers of hierarchically ordered functional projections with dedicated semantic and discourse-pragmatic functions. This branch of syntactic analyses is called 'cartographic' syntax (see also Cinque (1999)). In Rizzi's extended C-domain (see (2)), we find positions relating to finiteness (Fin), clause type (Force), and positions for topics (Top) and fronted focus elements such as foci and *wh*-phrases (Foc). Rizzi provides

[1] Chomsky (1986) proposed that INFL be the head of IP, which formerly was the category S, and that COMP be the head of CP, which had been known as S-bar.

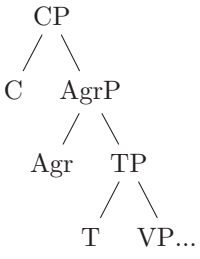
evidence for the existence of these different heads in the CP by showing that in Italian topics and foci behave differently and that they have the possibility to intervene between the Force and Fin positions. This kind of analysis of the C-domain will be important in the upcoming discussion as it opens for the possibility of the Verb Second property targeting several different projections (see Section 3.1).

(2)



The idea of a split IP was originally suggested by Pollock (1989) who argued that the IP-domain should be split into a projection hosting agreement features (AgrP) and a projection hosting tense features (TP). The split-IP analysis allows for a division between 'short' and 'long' verb movement targeting IP (Infl in Pollock's terms) and AgrSP, respectively. Based on evidence from French verb placement, Pollock posits the existence of a position for verb movement between adverbials and sentential negation. In Pollock's analysis, this position is the projection AgrP, situated below Tense (and Negation) and above the VP. In later analyses, it has become customary to change the order of AgrP and IP (following e.g., Chomsky 1995):

(3)



In my work I consider head movement (Koopman 1984, Travis 1984, Roberts 2001) to be an available theoretical tool. I treat head movement as part of the syntax as opposed to a PF operation (cf. Chomsky 2001).

2.3 Adverbs

Starting with Emonds (1976), (sentence) adverbs have often been used as a diagnostic for the movement of arguments (and of verbs, e.g., Pollock 1989). In the articles in this dissertation, I use positioning with respect to adverbs to determine verb placement possibilities (i.e., in **Paper I**, **III**, **IV**). It is therefore important to clarify how I assume adverbs to be integrated into clause structure. There are two main approaches in the literature (for an overview see e.g., Alexiadou 2004): on the one hand there are analyses where adverbs can be base generated in a variety of positions and introduced into the structure through adjunction to any maximal projection (e.g., Sportiche 1988). On the other hand, hierarchical accounts exist where adverbs have fixed base positions in specifier positions of functional projections (e.g., Cinque 1999). I will assume an adjunction analysis of adverbs. I also make use of the well-known classification of adverbs into event-related and proposition-related adverbs (i.e., predicate vs. sentence operators in Thomason & Stalnaker 1973) and assume that event-related adverbials (VP-adverbs) are base generated above vP, while proposition-related adverbials are base generated higher and attach to IP (see e.g., Jackendoff 1972, Kayne 1994).

2.4 Information Structure

Issues concerning Information Structure (IS) play a role for matters discussed in this dissertation, and some notes on these terms are therefore in order. When syntax allows different word orders, discourse factors can take over and affect the word (order) choices made by the speaker in actual production (see Chapter 5 for further discussion of factors affecting syntactic variation). Several pragmatic factors have been argued to affect the way we form sentences, e.g., illocution, implicature and presupposition, empathy, and the cognitive status of discourse referents (Vallduví & Engdahl 1996). Information structure notions such as focus, (back)ground, topic and givenness can help to describe structurally different but informationally equivalent sentences. Vallduví (1993) uses the term information packaging to refer to the structuring of sentences in this way and shows that information packaging is realised cross-linguistically in different ways (by syntactic, prosodic, or morphological means) (see also Vallduví & Engdahl 1996). Prince (1986) makes a similar statement that speakers form their utterances in order to structure the information they want to convey; information in the discourse does not simply correspond to an unstructured set of propositions. According to current assumptions, information structure notions such as focus and topic are licensed in specific projections within the CP layer (Rizzi 1997, see (3) above). Different heads within the complementizer layer for these notions are distinguished on semantic and pragmatic grounds (e.g. Benincà & Poletto 2004).

The use and exact definition of different information structure terms varies widely, and a few terminological clarifications are therefore necessary. I follow

Stalnaker (1974, 2002) in taking the notion of common ground to be what is presupposed or given. The common ground of a conversation consists of what is shared by the participants in the conversation. It includes not only what is explicitly stated but also what is shared belief among participants (Stalnaker 2002: 706). Importantly, the propositional attitude of the speaker is public: one presupposes that ϕ only if one presupposes that the other collocutors presuppose ϕ as well. Information presupposed at a particular point in a conversation can be represented with a given set of possible worlds: the 'context set' (Stalnaker 2002: 707).

Central to some of the discussions in this dissertation (i.e., in **Paper I**, **III** and **IV**) is the distinction between presupposition and assertion. Presuppositions are the underlying beliefs present in the common ground that are necessary to interpret an utterance. Assertions are the proposed changes to the common ground (Heim & Kratzer 1998: 75–79). I illustrate this distinction in (4): (4-a) presupposes that Myrte has been rollerskating before and asserts that she is excited to do so tomorrow; the sentence (4-b) asserts that Myrte thinks rollerderby is awesome, but it does not presuppose anything.

(4) a. Myrte is excited to rollerskate again tomorrow.
b. Myrte thinks rollerderby is the best sport.

Sentences are commonly divided into focus and ground. Ground is the known part of the sentence, which is anchored to the previous discourse, while the focus is informative in making some new contribution to the discourse. Several distinct characterisations of the terms ground and focus have been made in the literature. I will take focus to be a kind of emphasis that is used by the speaker to highlight a part of the utterance as informative. What is focal is necessarily new or non-derivable information but can involve referents that have been mentioned in the preceding discourse and therefore are themselves new *or* given (Halliday 1967: 204). I follow Vallduví & Engdahl (1996: 462f.) in assuming that what makes foci new or informative is not their denotational force in itself, but rather the fact that a focused constituent provides an instantiation of some variable previously underspecified.

Similarly, there is little to no consensus on how to define the notion givenness. Prince (1981) suggests that both linguistic and extralinguistic factors play a role in determining the givenness of an entity. These factors include prior mention, inferability from a previously mentioned entity, and whether the entity is retrievable from knowledge of the world. More formal semantic approaches to givenness define given entities as 'anaphorically recoverable' (e.g., Halliday 1967). This description is similar to the definition of focus by Krifka (2007) who argues that something is given if it is part of the denotation of the common ground. New information, on the other hand, is not recoverable and defined as 'textually and situationally non-derivable information', and also as 'contrary to some predicted or stated alternative' (idem 1967: 206). Focus and givenness can play a role in determining word order choice in many different constructions (e.g., object and subject shift in North Germanic; see inter alia Westergaard

2011, Andréasson 2013). I refer to information structure notions in **Paper I**, **II** and **IV** when accounting for word order choice in Norwegian *wh*-questions and verb placement in North Germanic embedded clauses.

Chapter 3

Verb Second

In this chapter I introduce the phenomenon of Verb Second (V2) and present a review and synthesis of prior literature on the phenomenon to help the reader situate the articles in this dissertation in the broader research field. I will detail classical and more recent accounts of Verb Second (3.1), discuss a typology of different types of V2 languages (3.2), and review some more recent discussions and innovations to the classical understanding of V2 (3.3).

3.1 An introduction to theories of Verb Second

As stated earlier, the finite verb is obligatorily in the second position of the clause in all Germanic languages apart from Modern English. This phenomenon is called Verb Second (V2). In Verb Second languages, the finite verb is the second constituent, regardless of what the first constituent is, see (1).

(1) *Dutch*

a. Charlotte **bak-t** op vrijdag altijd taart.
Charlotte bake-3SG.PRS on Friday always cake

b. Op vrijdag **bak-t** Charlotte altijd taart.
on Friday bake-3SG.PRS Charlotte always cake

c. Taart **bak-t** Charlotte altijd op vrijdag.
cake bake-3SG.PRS Charlotte always on Friday
'Charlotte always bakes cake on Fridays.'

The nature of this initial constituent is not restricted in any way. However, one of the defining characteristics of a V2 language is that only one constituent can ever be fronted to the preverbal position (Holmberg 2015: 352) (see (2)).

(2) *På fredager Charlotte bake-r alltid kake.
on Fridays Charlotte bake-PRS always cake
intended 'Charlotte always bakes cake on Fridays.' [*Norwegian*]

This first constituent must move to the clause-initial position; constituents that are externally merged here do not count as first constituents for V2 (Holmberg 2015: 347). Examples of externally merged constituents are conjunctions and left-dislocated phrases (3).

(3) Dat boek, dat heb ik niet gelezen.
that book that have.1SG.PRS 1SG not read.PTCP
'That book I haven't read.' [*Dutch*]

V2 is characteristic of the Germanic languages, but it is also found in other language families. Examples are Breton (Celtic), Estonian (Finno-Ugric) and Kashmiri (Indo-Aryan) (for a full overview of all known V2 languages see Holmberg 2015: 343).

Analyses of Verb Second go back to seminal work by Koster (1975) and Den Besten (1983) on verb placement in Dutch and German. Dealing with the alternation of verb plascement in German and Dutch main and embedded clauses, Den Besten argued that "... a special verb preposing rule Verb Second will be needed which adjoins the finite verb to whatever constituent happens to be in first position in the declarative sentence" (1983: 55). He also observed that complementizers and verb fronting are in complimentary distribution:

(4) *Dutch*

a. Morgen vier-t Floor haar verjaardag.
tomorrow celebrate-3SG.PRS Floor her birthday
'Floor is celebrating her birthday tomorrow.'

b. Anne zeg-t [dat Floor morgen haar verjaardag
Anne say-3SG.PRS that Floor tomorrow her birthday
vier-t.]
celebrate-3SG.PRS
'Anne says that Floor is celebrating her birthday tomorrow.'

Because of this generalisation, Den Besten proposes that raising of the verb is blocked by the presence of the complementizer (1983: 55). As an explanation for this difference between main and embedded clauses, Den Besten argues that the complementizer and finite verb compete for the same position in COMP (i.e., C^0 in post Den Besten's theories) and that the finite verb must move up the clause from its VP-internal base position to lexicalise this position in the absence of a complementizer. This classical analysis of V2 can thus be schematised as in (5), with the finite verb in C and some initial constituent projected to its left.

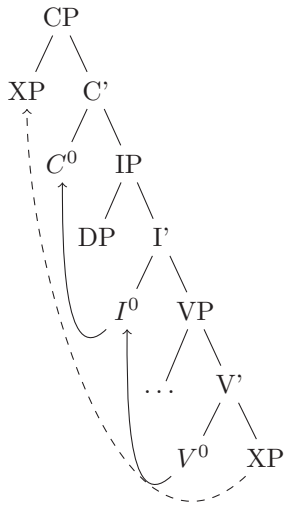
(5) $[_{\text{CP}}\ \text{XP}\ \text{V}_{\text{fin}}\ [_{\text{TP}}\ ...]]$

Verb Second was originally defined as a set of operations: First, the finite verb is fronted to a position to the left of the sentential core (Koster 1975: 127, Den Besten 1983: 51–6). Second, another operation fronts a constituent to the position to the left of the moved finite verb. V2 is thus a combination of leftward movement of the finite verb, i.e., movement from its base position in the VP to a position in the C-domain, and XP-merger. Within later developments of X-bar Theory (Jackendoff 1977, Kayne 1984, Chomsky 1986), these classical accounts of the V2 property have been viewed as the bipartite requirement that the finite verb, attracted by a functional head, moves to an empty head position in the Complementizer domain, and that this functional head requires a constituent to move to its specifier position.

The first operation is movement from V^0 to C^0, or more precisely, V-to-I-to-C movement. V-to-I movement moves the verb to the right of the subject

position. The motivation for this movement is the need for the verb to pick up verbal inflection. V-to-C movement moves the verb to the immediate left of the canonical subject position in specIP (which in many cases results in Subject – Verb inversion).

The second part of the V2 operation is A'-movement of some constituent to specCP. This straightforwardly explains why no more than one element can occur before the V2 verb: there simply is no room in the structure. Den Besten's generalisations were further developed in work by Holmberg (1986), Platzack (1986), Taraldsen (1986), Vikner (1995), and Platzack & Holmberg (1995), among others. I illustrate this two-part derivation in (6).



(6)

Some analyses of V2 languages assume that the verb moves to different positions in subject-initial and non-subject initial V2 clauses. Such 'asymmetric' analyses follow a theory of V2 first proposed by Travis (1984), according to which the subject is in SpecIP in main and embedded clauses, and the verb moves to C only in connection with movement of a non-subject phrase to specCP, or else when a verb-first structure is called for. In subject-initial declaratives, the verb *only* moves to the inflectional domain IP. This theory has been further developed most notably in Zwart (1993, 1996) within a Chomskyan minimalist theory (Chomsky (1993, 1995)) (see also Lohndal et al. 2020 for a discussion of such an analysis applied to Norwegian V2 and non-V2 declaratives). An obvious advantage of this analysis is that it does not need to stipulate a special mechanism for moving the subject from its base position to specCP in subject-initial clauses. However, under this account the finite verb has two different positions in main clauses: I^0 in subject-initial clauses and C^0 in non-subject initial clauses. I assume a 'symmetric' account of V2 with generalised verb movement to C^0 in all main

clauses.

The above-mentioned analyses of V2 are all based on assumptions about the nature of the C^0 position. Either there exists some feature-checking relation between the positions specCP and the verb in C^0, or some property of the latter position causes the verb to move here in V2 languages. Different theories of such a property have been proposed. For example, Holmberg (1986: 136f.) argues that CPs are predicates, resembling VPs, and therefore need a [+V] element in their head. Platzack (1986) assumes that C^0 assigns nominative case to the subject in specIP and that C^0 must be lexical to do so (see also Koopman 1984). To lexicalise C^0, the complementizer (in embedded clauses) or the finite verb (in main clauses) must move here. In Holmberg & Platzack (1995), it is argued that V2 languages have a finiteness operator '[+F]' in C^0. What most of these theories have in common is that they assume that all C-heads in V2 languages attract the finite verb if it is not already filled with something else. A more recent analysis in this vein is Roberts (2004) who argues that V2 is the result of a generalised EPP-feature (i.e., Extended Projection Principle, Chomsky 1982) on a head in the extended Left Periphery, namely Fin, which requires its specifier position to be filled (see the structure in (2) in Chapter 2). Holmberg (2015: 375) presents a similar account but does not specify which head attracts the finite verb.

All the approaches to verb movement out of VP discussed above make use of head movement to move the verb to I or C. As an alternative to head movement, remnant movement approaches to verb movement have been proposed. Remnant movement refers to phrasal movement of a constituent from which material has been extracted prior to movement, i.e., constituents containing a trace (Müller 2004).

Nilsen (2003, ch. 3) uses remnant movement in his analysis of V2 in Mainland North Germanic (i.e., Danish, Norwegian, Swedish). He argues North Germanic V2 is the result of XP-movement, rather than head movement. Nilsen assumes that adverbs are adjoined right above the verb they take scope over, and that complex remnant movement operations are responsible for various Verb > Adverb orders as well as V2 orders. Nilsen builds his argument on V2 violations with 'focus particles' such as *bare* 'just' (2003: 79f.). I discuss such (apparent) violations of V2 order in **Paper I** and **III**. Müller (2004) derives V2 order without head movement by arguing that V2 order is the result of movement of a remnant vP to specCP. The moving vP consist of the finite verb and the edge of vP, which crucially contains only one phrase.

Wiklund et al. (2007) offer a remnant movement approach to Icelandic and Northern Norwegian verb movement[1]. In their analysis, the difference between V-to-I and V-to-C movement is captured in the amount of material pied-piped, i.e., verb movement to C always pied-pipes a specifier while verb movement to I only involves one overt element.

[1]Contrary to standard assumptions, Wiklund et al. (2007) propose that varieties of Northern Norwegian optionally allow verb movement to I, and that verb movement in Icelandic is to C.

It is worth mentioning that approaches to Verb Second also exist in other frameworks. Anderson (2000: 323f.) provides an account of V2 within Optimality Theoretic (OT) syntax where Verb Second structures are the results of two high-ranking constraints 'NON-INITIAL(V_{fin}, S)' and 'EDGEMOST(V_{fin}, L, S)' (with S meaning 'sentence' and L 'left'). These constraints move the verb to a position as close to the left edge as possible, but not to the initial position. This account is not a proposal on the mechanics of Verb Second but concerns the motivation for the movement. In this OT-view, V2 is purely about linearization, not about feature-checking.

3.2 Main–embedded clause asymmetries and the typology of V2 languages

In the seminal work on Germanic V2 by Koster (1975) and Den Besten (1983), the obligatoriness of verb movement in all main clauses, and the impossibility of this movement in (most) embedded clauses, led to V2 being understood as a 'root' or 'Main Clause Phenomenon' restricted to matrix clauses (Emonds 1970). However, this root/non-root or main/embedded clause distinction is only an artifact of the typical, but not universal complementary distribution of lexical complementizers and V2 in Dutch and German.

The asymmetry between main and embedded clauses in Dutch/German (see (4) in the previous section) and the 'root' character of V2 was pivotal to the classical V-to-C accounts of V2, but already in the 1980s it was shown that these asymmetries are not universal within V2 systems. Vikner (1995: ch. 4) proposed a typology of different types of V2 languages. In this typology, German is a 'well behaved' V2 languages where V2 is available in all clauses that lack an overt complementizer, see the example in (7).

(7) *German, (Vikner 1995: 66)*

a. Er sag-t, daß die Kinder diesen Film gesehen
he say-3SG.PST that the children this film see.PTCP
habe-n.
have-3PL.PRS

b. Er sag-t, diesen Film habe-n die Kinder gesehen.
he say-3SG.PST this film have-3PL.PRS the children see.PTCP
'He said that the children had seen this film.'

Dutch is often categorised in as a 'well behaved' V2 language as well, but in fact differs from German in not allowing V2 in embedded clauses without complementizers (Broekhuis & Corver 2016: 1250f.). Although Standard Dutch never allows V2 in embedded clauses, a few non-standard varieties allow constructions where V2 occurs with an overt complementizer (example from SAND (Barbiers et al. 2006), speaker F077p):

(8) Jan vind-t dat je moe-te zulke dingen niet
Jan think-3SG.PST that you must-3SG.PRS such things not

geloaven.
believe.INF
'Jan thinks you should not believe these things.' [*Urk Dutch*]

All the Germanic VO languages, as well as Frisian (which is OV like Dutch and German), allow V2 in embedded clauses, see (9) and (10) for examples from Frisian (De Haan & Weerman 2010[1986]: 70) and Swedish.

(9) Pyt sei (dat) hy hie my sjoen.
Pyt say.3SG.PST that he have.3G.PST me see.PTCP
'Pyt said that he had seen me.' [*Frisian*]

(10) Han sa att Charlotte ha-de troligen åkt till stan.
he say.PST that Charlotte have-PST probably go.PTCP to town
'He said that Charlotte probably went to town.' [*Swedish*]

In Frisian, V2 can occur in embedded clauses with or without an overt complementizer. In Danish, Norwegian and Swedish, the complementizer is obligatory in such clauses (Vikner 1995: ch. 4, Heycock 2006: 191f.). However, V2 order in these languages is possible only after certain matrix verbs. In Vikner's typology, these languages are therefore called 'limited embedded V2' languages. Embedded V2 (EV2) is particularly common in complements of verbs of *saying* and *thinking*, and is often claimed to only be possible in the complement of so-called 'bridge' verbs, i.e., verbs that allow extraction from their clausal complement (e.g., Vikner 1995: 70–72, Reis 1997).[2]

The correct characterisation of the embedded environments that allow V2 has been extensively discussed ever since the seminal work of Hooper & Thompson (1973) on embedded root phenomena. Hooper and Thompson (1973) distinguish five classes of predicates that take clausal complements (1973: 473-4) and argue that Main Clause Phenomena, such as EV2, can only occur with those predicates that allow their complement to be asserted. That is, non-factive verbs (Hooper & Thompson's class A and B; strongly/weakly assertive verbs), such as *say* and *report*, can occur with EV2 *iff* the embedded clause constitutes the main assertion (1973:477). Factive verbs such as *regret* or *discover* (class D and E) presuppose the truth of their complements and are not compatible with assertion. Hence, these verbs can only take canonical, non-V2, subordinate clause complements (1973: 479). The subset of contexts that allow EV2 may differ slightly from language to language and even from speaker to speaker, however. The distribution of embedded V2 in the Nordic languages has been extensively discussed (e.g., Anderson 1975; Platzack 1986: 224–7; Vikner 1995; Heycock 2006; Julien 2007, 2015; Wiklund et al. 2007, 2009; **Paper I**, **IV**). I will return to this issue in my discussion of verb placement and movement in North Germanic in Chapter 4.

[2]It has been suggested that embedded clauses with V2 word order are not actually embedded (e.g., De Haan 2001). There is however ample evidence that these clauses are embedded in Mainland North Germanic; I refer the reader to Julien (2015: 157f.) who provides an overview of such arguments.

Limited EV2 languages that have V2 in main, but generally not in embedded clauses, are also sometimes called 'asymmetric'. 'General' or 'symmetric' V2 languages on the other hand, are languages where V2 applies generally in all finite clauses. Examples of languages that allow V2 under a wider range of predicates are Icelandic (e.g., Thráinsson 1986, 2007; Wiklund et al. 2007, 2009), Yiddish (e.g., Diesing 1990) and Modern Spoken Afrikaans (e.g., Biberauer 2002). The contrast between two such V2 systems is shown in (11) with examples from Norwegian (limited V2) and Icelandic (general V2).

(11) a. *Han angre-t at han ha-dde ikke gjort leksene.
he regret-PST that he had-PST not do.PTCP homework.DEF
'He regretted that he had not done his homework.' [*Norwegian*]

b. *Hann harma-ði að hann haf-ði ekki gert
he regret-3SG.PST that he have-3SG.PST not do.PTCP
heimavinnuna.
homework.DEF
'He regretted that he had not done his homework.' [*Icelandic*]

As an alternative to Vikner's terms 'limited' and 'general' embedded V2, Gärtner (2019) uses the terms 'narrow', 'broad' and 'free' EV2. Narrow EV2 systems are languages that confine V2 to main clauses and a limited number of embedded contexts. In these systems, embedded V2 is confined to what he calls 'assertion-friendly' environments. 'Broad EV2' languages allow EV2 in more environments without allowing it across the board, and finally 'free EV2' systems would be varieties where all environments allow EV2. Holmberg calls Vikner's two different embedded V2 systems 'C-V2' vs. 'I-V2' (2015: 356–8). 'I-V2' varieties are varieties where V2 is derived by virtue of V-to-I movement (at least in embedded clauses), and in C-V2 languages, V2 is always the result of V-to-C movement. The C-V2 languages all allow V2 order in some embedded clauses, and the I-V2 languages allow non-V2 order in some embedded clauses. Differences between V-to-C and V-to-I will be discussed in the next chapter.

A final type of V2 in the typology of V2 languages is 'residual V2'. In a residual V2 language, the finite verb is in second position in a few specific constructions, but not across the board. Present-day English is an example of such a language, with V2 in questions, with non-main verbs in declaratives (Vikner 1995: 48f., Holmberg 2015: 343).

The possibility of V2 in combination with an overt complementizer in several V2 languages is problematic for a Den Besten-style analysis of V2 where the complementizer and the finite verb compete for the same position. The majority view of the co-occurrence of complementizer and finite verb have utilised a recursive CP structure where the complementizer is situated in the higher C-head and the finite verb in the lower head (see e.g. De Haan & Weerman 1986, Platzack 1986, Holmberg 1986, Iatridou & Kroch 1992, Holmberg & Platzack 1995). Recently, analyses of V2 co-occuring with a complementizer in Mainland North Germanic embedded clauses have proposed that the complementizer can select a complement of a certain size: a bigger structure when the verb moves

up the clause, and a smaller structure when the verb stays *in situ* (Wiklund et al. 2007; Julien 2015, 2020; Vikner 2017; Nyvad, Christensen & Vikner 2017). Alternatively, and especially for general EV2 languages, it has been proposed that the finite verb moves to I^0 when a complementizer is present in the C^0 position (Diesing 1990, Rögnvaldsson & Thráinsson 1990, Santorini 1992).

I discuss this pattern and the different analyses proposed further in **Paper IV**.

3.3 Challenges, updates, and developments in accounts of V2

In the last two sections, I already discussed two main theoretical advances to the classical account of V2: the expansion of the CP-domain in the Cartographic Enterprise (Rizzi 1997, Cinque 1999, Cinque & Rizzi 2009) which opened for V2 related movement to target different projections in the CP; and CP-recursion approaches to embedded V2. The fact that "all the V2 languages allow certain deviations from the strict V2 model" (Holmberg 2015: 346) has been the starting point for a discussion of whether the V2 property really is best understood as a single parameter. Weerman (1988) famously dubbed V2 a 'conspiracy' of a range of different grammatical operations that have a similar outcome on the surface. Biberauer & Roberts (2012), propose that there exist different levels of parameters: macro-, meso-, micro- and nanoparameters (2012: 268). Using these parameters, they explain the diachronic developments in the loss of V-to-I movement in English to the verb- and auxiliary-movement in present-day English: The mesoparamater ('all finite verbs raise to I') is replaced by a microparameter ('only finite auxiliaries raise to I') (2012: 271f.). In a similar fashion, Lohndal et al. (2020: 787) argue that V2 in present-day Norwegian is a set of smaller rules in local domains. These rules may further vary between languages and dialects, clause types and linguistic contexts. Lohndal et al. build on Westergaard's 'micro-cue' model (2008, 2009ab, 2014) which provides an account of fine-grained variation within V2 systems. Within this model, a speaker of a V2 language may have several micro-grammars that can apply at the level of specific clause types, verb types or even finer distinctions. These grammars differ in which heads in an articulated/split CP-domain trigger verb-movement and XP-movement to their specifier position.

These expansions to the understanding of Verb Second have been driven by the need to account for an ever-increasing number of (apparent) exceptions to the V2 rule described in classical V2 theories. We already saw in Section 3.1 (example (3)) that these 'Verb Third' (V3) orders are frequently understood as actual V2 orders with an additional, externally merged (base-generated) element in preverbal position; or the offending element simply 'does not count' as the first constituent for V2 (see Holmberg 2015: 247f., for a number of examples). Poletto (2002) alternatively proposes that V2 languages as may differ in how many (and which) constituents can precede the finite verb the V2 position. Her explanation for this is that languages differ in which heads in the extended

C-domain attract the verb. All V2 languages have a strong Fin feature, but some V2 languages also have a strong Force feature, which forces the verb to move on to Force. Hence, there is variation in the number of positions available above the finite verb.

I will discuss some other examples of 'V3' order in a V2 system in the next section on North Germanic verb placement. Verb First (V1) order is also a common order in various clause types. It is the unmarked order in yes/no-questions and imperatives, see (12).

(12) *Dutch*

a. Lees-t Max vandaag de krant?
read-3SG.PRS Max today the paper
'Is Max reading the paper today?'

b. Wees jij eens stil!
be.IMP.SG you once quiet
'Be quiet for once!'

However, such examples of V1 order are commonly analysed as being covertly V2, with the assumption that the initial position is occupied by an abstract question or imperative operator (Katz & Postal 1964).

A broadening of the focus from syntax proper, to the syntax-semantics/pragmatics interfaces has also led to new proposals about V2 and related phenomena. That is, the base position of the V2 verb and the position it moves to are typically clear, but the motivations for these movements are still debated. Leftward movement to positions in the Left Periphery is employed in V2 and non-V2 languages for information-structural effects. It is obvious that the movement of constituents to specCP has semantic and information-structural effects: In Germanic V2 fronted objects are typically interpreted as topics in Germanic V2 languages, but as focus in Kashmiri (Holmberg 2015: 371).

The semantic effects and motivation of verb movement to C have also been extensively discussed recently. Truckenbrodt (2006), for example, studies the semantic effect ('illocutionary potential') of V-to-C movement by comparing how V-to-C and V-final clauses may be used. He argues that when the finite verb is in C, the clauses can be used to make assertions (2006: 260-262). Such a link between assertive force and V2 has also been extensively discussed as it applies to the possibility of embedded V2 (for North Germanic, see e.g., Andersson (1975); Holmberg & Platzack (1995); Wiklund et al. (2009); Wiklund (2010); Jensen & Christensen (2013); Julien (2015, 2020); Caplan & Djärv (2019)). This debate on the illocutionary force of embedded V2 and which conditions allow this word order, is far from settled. I will discuss this further in the next chapter on verb placement in North Germanic, as well as in **Papers I** and **IV**.

Finally, a growing interest in the interaction of syntax and prosody has produced work on Verb Second in the syntax-prosody interface, for example on the well-formedness of V2 structures (Burton-Robert and Poole 2006). Another example of work on this interface is the work by Roll et al. (2009, 2011), who discuss how Swedish clauses with V2 order have a 'left-edge boundary tone' which

functions as a prosodic cue for V2. The interaction of prosody on word order choice is also relevant in the discussion of V2/non-V2 variation in Norwegian (Rice & Svenonius 2002, **Paper IV**).

Chapter 4

North Germanic verb placement

4.1 Basic word order

As previously stated, the North Germanic (NG) languages are closely related and share several syntactic properties both with each other, as well as with the West Germanic languages. Like English, North Germanic is VO and just as Dutch and German, NG has V2 word order. All the modern North Germanic languages (i.e., Danish, Faroese, Icelandic, Norwegian, and Swedish) are SVO languages: the basic word order is Subject > Verb > Object/complement. The basic structure of the North Germanic VP has changed from head final (OV) to head initial (VO), with earlier varieties of these languages showing an OV-pattern. This change from OV to VO took place in Norwegian during the Old Norse period and was more or less completed by the time of early Modern Norwegian (16th century) (Faarlund 2021: 4), and similar timings for this change have been shown for Swedish (Delsing 2000) and Icelandic (Hróarsdóttir 2000).

Because of the default SVO word order, the Verb Second property is not unambiguously manifested in subject-initial clauses in modern North Germanic (unlike in SOV languages such as Dutch or German):

(1) Charlotte elske-r kanelsneglene på Smørtorget.
Charlotte love-PRS cinnamon.buns at Smørtoget
'Charlotte loves the cinnamon buns at Smørtorget.' [*Danish*]

Håkansson (1997: 50) estimates that 60–80% of declaratives are subject-initial in North Germanic. In such subject-initial clauses, we only know that the verb has moved to a higher position when an additional diagnostic for movement, such as an adverb or negation, is present (3). In non-subject initial clauses, where the direct object is topicalized, subject-verb inversion indicates that the verb must have moved up in the structure to C as in (3).

(2) Myrte äte-r aldrig kanelbullar.
Myrte eat-PRS never cinnamon.buns
'Myrte never eats cinnamon buns.' [*Swedish*]

(3) Kanelbollene på Vervet spise-r Bror-Magnus gjerne.
cinnamon.buns at Vervet eat-PRS Bror-Magnus gladly
'Bror-Magnus gladly eats the cinnamon buns at Vervet.' [*Norwegian*]

In (2), we see that the finite verb comes before any sentence-medial adverb or negation. I take these adverbs to be positioned above the base position of the verb. The Verb > Adverb order therefore indicates that the verb must have moved. I furthermore take the default position of the subject to be specIP and

thus follow Bobaljik & Jonas (1996) in assuming that the non-initial subject has also moved out of VP to specIP in the previous example (as well as in non-subject initial embedded clauses). In subject-initial clauses, the subject moves to specCP (see also Svenonius 2002). The verb in North Germanic always moves from VP to vP (to derive the OV base order), and subsequently via the inflectional domain to C^0 in V2 clauses.

4.2 Verb placement in embedded clauses: V-to-C vs. V-to-I movement

As described above, the North Germanic (NG) languages have a long joint history and often show parallel historical developments. The languages share the basic SVO-word order and all have V2 in main clauses, but a split between 'Insular' North Germanic (i.e., Icelandic) and 'Mainland' North Germanic can be seen clearly in embedded clauses. In Modern Icelandic embedded clauses, the finite verb typically precedes negation and sentence-medial adverbs (but see e.g., Angantýsson (2007) on V3 in Icelandic embedded clauses); in the modern standard Mainland North Germanic (MNG) languages, the embedded finite verb follows such elements. This difference between Insular and Mainland North Germanic embedded clauses is shown in the embedded questions in (4) and (5).

(4) Páll spurði hvort Ása kemur oft of seint í skólann.
Paul ask.PST if Asa often come.PRS too late to school.the
'Paul asked if Asa is often late for school.' [*Icelandic*]

(5) Pål spurte om Anne ofte komme-r for sent til skolen.
Paul ask.PST if Anne often come-PRS too late to school.the
'Paul asked if Anne is often late for school.' [*Norwegian*]

To explain the difference in default verb placement in embedded clauses, it has often been assumed that Icelandic exhibits obligatory verb movement to the inflectional domain, independently of Verb Second, and that the Mainland North Germanic languages do not allow this movement (e.g., Kosmeijer 1986, Vikner 1995). A connection between independent V-to-I movement and rich inflection has commonly been made (e.g., Roberts 1985, Kosmeijer 1986, Platzack & Holmberg 1989, and recently Koeneman & Zeijlstra 2014). The loss of V-to-I in Mainland North Germanic is a well-studied phenomenon and has been claimed to coincide with loss of person/number agreement on the verb. V-to-I in MNG was lost around 300 years ago (Falk 1993: 155f, Vikner 1995: 151, Sundquist 2003).

It has however been shown that varieties of Northern Norwegian still allow verb movement in contexts where V-to-C is not available (Bentzen 2005, 2007; Wiklund et al. 2007). I discuss this further in **Paper I**. On the other hand, contra V-to-T approaches like Rögnvaldsson & Thráinsson (1990), some proposals have treated Icelandic as a genuinely symmetric V2 language with V-to-C movement in both main and embedded clauses (Maling 1980, Wiklund et al. 2007).

The status of embedded verb placement in Faroese has been much debated in recent years (e.g., Jonas 1996; Thráinsson 2003; Heycock et al. 2010, 2012; Westendorp 2020, **Paper IV**). The consensus is that Faroese has been undergoing a change from a system like Icelandic to a system like the MNG languages. In other words, the language is at a very late stage of losing V-to-I movement. Results from a magnitude estimation test in Heycock et al. (2010) supported this claim by showing no quantifiable difference in the acceptance of verb movement above negation between Faroese and Danish. Verb movement over a sentence adverbial in contemporary Faroese is now primarily possible in assertive contexts, as in Mainland North Germanic. In a later study, Heycock et al. (2012) argued that speakers nonetheless still seem to have V-to-I as a 'markedly dispreferred' option in their grammar Heycock et al. (2012: 581), as evidenced by the difference in judgements between non-subject-initial orders and V-NEG orders in Faroese but not in Danish embedded clauses. These results show that Faroese seems to still be in the process of changing from a syntax preserved in modern Icelandic to a system like that of modern Danish, a change that has been argued to be completed in Mainland North Germanic three centuries ago (Falk 1993, Vikner 1995, Holmberg & Platzack 1995, Sundquist 2003). I discuss embedded verb placement in Faroese further in **Paper IV**.

It can be difficult to distinguish V-to-I and V-to-C movement in embedded clauses as the two movements often result in the same surface order with the verb to the left of the adverb (i.e., Verb > Adverb). Firstly, the restriction of V2 to only a subset of clause types is one way to distinguish between the two. Additionally, cases of non-subject-initial V2 (topicalization) are indisputable cases of V-to-C (i.e., movement of some XP and V_{fin} to positions above the subject). Moreover, embedded V-to-C clauses triggers island effects for long extraction (Holmberg 1986: 111), while extraction does not interact with V-to-I movement (see also **Paper IV**). Another reflex of V-to-C movement is described by Julien (2015: 140) for Modern Norwegian. She shows that deictic pronouns in embedded V-to-C clauses may behave as if the CP were encoding direct speech (a phenomenon referred to as 'indexical shift'), i.e, a second person singular pronoun in such clauses may refer either to the addressee or to the speaker of the clause. Petersson (2009) provided similar examples for Swedish. Finally, the placement of verbs with respect to different types of adverbs that has been used to distinguish between embedded Verb > Adverb as the result of V-to-I or V-to-C (see e.g., Bentzen 2005, 2007; Wiklund et al. 2007; Bentzen et al. 2009). I discuss and make use of this difference in **Paper I** when discussing (Northern) Norwegian embedded verb placement.

4.3 Licensing of embedded V-to-C

We have already seen that V2 is possible in Mainland North Germanic embedded clauses, but only in a subset of clauses (10). I provide an example of this word order in Norwegian in (6) from the Nordic Dialect Corpus (Johannessen et al.

2014).[1]

(6) De mente o mamma att e kunn kje huse for e va jo
that think she mom that I could not remember because I was INTJ
kje så gammel.
not so old
'Mom thought I could not remember because I was quite young.'
[*kirkesdalen04gk*]

Recent corpus studies have shown that embedded V2 (EV2) as the result of V-to-C movement occurs quite frequently in Danish, Norwegian and Swedish. In a study of different spoken and written corpora, Garbacz (2005) shows that for spoken Danish 27% of embedded *that*-clauses with negation have Verb > NEG order (corpus: Projekt Bysociolingvistik), for Swedish 35% of clauses had this order (Göteborg Spoken Language Corpus) and the same holds for 29% of Norwegian clauses of this type (Big Brother Corpus). Jensen & Christensen (2013: 47) even find that almost half of the complement clauses in the spoken Danish LANCHART corpus have Verb > Adverb order. Ringstad (2019) finds that 35.9% of the *that*-clauses with negation in a corpus of spoken Norwegian have V-NEG order (2019: 342).

In written corpora of MNG, the percentages of EV2 are very different. Caplan & Djärv (2019: 12) for example, provide data from a set of written Swedish corpora and show that only approximately 5% of sentences that provide a diagnostic to test EV2 status, actually use this word order. Interestingly, the difference between spoken and written corpora does not seem to hold for Faroese: Heycock et al. (2012: 572) report that in their language samples, declarative complements with negation occurred with EV2 order (Verb > NEG) in 39% of cases in speech and 45% in written texts. Remember however that in earlier work, Heycock et al. show that Faroese and Danish speakers are similar in their judgement of EV2 clauses. The difference between the two modalities has led some researchers to propose the low frequency of EV2 in written MNG is the result of some normative, prescriptive rule against EV2 in these varieties (see discussion in e.g., Garbacz 2005 for Norwegian; Heycock et al. 2012, Jensen & Christensen 2013 for Danish).

In Section 3.2 I discussed how the possibility of Verb Second in embedded clauses has been linked to assertion. The term 'assertion' is often abandoned in recent literature since many scholars have described what best captures the environment of embedded V2 in more specific terms. Wiklund et al. (2009) put forth the claim that a predicate allows V2 in its complement if it allows for the complement to be the 'Main Point of Utterance' (MPU). This notion is adopted from Simons (2007) who showed that a specific subset of verbs can be used

[1] It has been suggested that these embedded V2 clauses are not actually embedded (e.g., De Haan 2001). Julien (2015: 157f.) provides an overview of the ample evidence that this is not the case however. Showing for example that there is a Sequence of Tense relation between the main and the embedded clause, and that quantifiers in the main clause can bind variables in the embedded clause.

parenthetically. In such cases, the embedded clause carries the MPU while the main clause serves some other discourse function. Wiklund et al. (2009) show that in Faroese, Icelandic, Norwegian and Swedish, the classes of predicates that can embed MPU-compatible clauses (i.e., strongly and weakly assertive verbs and semi-factives), can also embed clauses with EV2 order. Whereas non-assertive and factive verbs cannot embed an MPU and also impose restrictions on EV2. According to Wiklund et al. (2009), the availability of EV2 thus depends on the lexical properties of the embedding predicate.

Julien (2007, 2015) takes a different position and argues that EV2 may occur independently of an MPU-reading and vice versa. For Julien, all embedded V2 declaratives in Norwegian and Swedish share the property of having 'illocutionary force'. She argues that a Force head is responsible for the assertiveness of the clause as well as for the V2 order. In this way, assertiveness is a discourse-pragmatic function not directly determined by the lexical properties of the matrix predicate.

Alternatively, Jensen & Christensen 2013 and Caplan & Djärv 2019, argue that the dimension of assertion that is relevant for the licensing of EV2 has to do with the discourse status of the embedded clause as new information. Caplan & Djärv (2019) provide evidence that the interpretive notion driving the distribution of embedded V2 is discourse novelty. Through statistical analysis of Swedish corpus data, they correlate the ability of predicates allowing EV2 with their ability to introduce new information into the discourse. In other words, verbs appearing with EV2 are also able to take 'out of the blue'-complements. In the account by Caplan & Djärv (2019), the licensing of EV2 is however not determined by the lexical semantics of the matrix predicate, but constrained by the pragmatic properties of the embedding context which has to be discourse-new. For Jensen & Christensen (2013) embedded V-to-C movement signals 'foregrounding' of the embedded clause.

Recently, empirical work has focused on testing some of the theoretical claims on the specific characteristics of embedding environments that allow for V2. Roll et al. (2009) examined the effects of main clause verb pragmatics and left-edge boundary tones (which are obligatory in V2 clauses) on syntactic processing in Swedish embedded clauses, using listener judgements and Event-Related Potentials. Standard Swedish main clauses are marked by a high tone associated with the last syllable of the first prosodic word. Embedding main clauses under a non-assertive predicate decreased that acceptance rate of the entire structure from 68% to 24% compared to a baseline assertive matrix predicate.

Moreover, a large continuous positive effect (P600) was also obtained by this modification of the lexical pragmatic context of the embedded clause. Testing the common assumption that MPU licenses EV2 in Swedish, Djärv, Heycock & Rohde (2017) present the results of two acceptability judgement tasks. They operationalise MPU as the "proposition that provides the most direct answer to a question" (2017: 15). Firstly, they show that discourse context can be manipulated such that even factive verbs can appear to license MPU. Secondly, discourse manipulation that shifted MPU between the main and embedded clause yielded no differences in the acceptability of EV2. Rather,

the acceptability of EV2 in Swedish was shown to be driven entirely by predicate class. And furthermore, EV3 orders always received higher ratings that EV2. Christensen, Christensen and Jensen (2019) used a text change paradigm to test their hypothesis that EV2 (and other Main Clause Phenomena) signal that more important information is to be found in the embedded clause, functioning as a foregrounding device (see also (Jensen & Christensen 2013). The results confirm the hypothesis, participants paid significantly more attention to Verb > Adverb clauses than to Adverb > Verb clauses under semifactive predicates.

The precise semantics that licenses embedded V2 remains hard to pin down and it seems likely that the exact definition of this notion is different for different languages or varieties. A related question is what the role of the matrix predicate is for embedded V2. Various approaches to this question have been taken in the literature. Either the embedding predicate selects for a particular type of clause, which is either compatible with V-to-C movement (e.g. a ForceP in Wiklund et al. 2009, Julien 2015) or blocks V-to-C movement (e.g. IP in Wiklund et al. 2009 or FinP in Julien 2015). Alternatively, it is stipulated that the compatibility between the verb and the complement is fundamentally semantic (e.g. Krifka 2014). A third alternative is a proposal that the compatibility between the matrix verb and asserted complements is essentially pragmatic in nature (e.g., Truckenbrodt 2006; Jensen & Christensen 2013; Woods 2016; Caplan & Djärv 2019).

4.4 Variable patterns in North Germanic

In the current syntactic literature, there is a consensus on the major word order differences between the modern North Germanic (NG) languages from a descriptive and empirical point of view (except maybe the status of embedded verb movement in Faroese). In this chapter I have already extensively discussed the (im)possibility of embedded V2 order, which will be discussed further in **Papers I**, **III** and **IV**. We also find variable patterns in North Germanic main clauses. Famously, some adverbs in North Germanic may optionally precede both subject and verb, yielding non-V2 word order (e.g., Platzack 1986: 200, Holmberg 1986: 100, Andréasson 2002; for an overview in NG, see Bentzen 2014a), as in the Norwegian example (7) from the Nordic Dialect Corpus (Johannessen et al. 2014).

(7) Kanskje det ikke bli-r så mye ferie.
maybe it not become-PRS that much holiday
'Maybe there will not be a lot of holidays.' [*aal02uk*]

Another set of adverbs that may yield non-V2 orders in North Germanic are 'focus-sensitive' adverbs (e.g., Nilsen 2003, Holmberg 2015). The adverbs *bare* and *nesten* are most common, but several other expressions show the same possibilities:

(8) *Norwegian* (Nilsen 2003: 79f.)

a. Jens bare gikk.
Jens just leave.PRS
'Jens just left.'

b. Han til og med les-te den.
he even read-PST it
'He even read it.'

It has been argued that these sentences are only linearly non-V2, but in fact involve verb movement (Brandtler & Håkansson 2017, Julien 2018, Lundquist 2018). These adverbs and the variable verb placement will be discussed further in **Papers I** and **III**. Variation is also found in the placement of the infinitival marker ((9); Thráinsson 1993, Vangsnes 2002) and imperative clauses ((10); Hulthén 1947, Jensen 2003) in Norwegian, but not in the other North Germanic languages.[2]

(9) *Norwegian*

a. Han prøv-de å ikke synge falskt.
he try-PST INF not sing.INF false

b. Han prøv-de ikke å synge falskt.
he try-PST not INF sing.INF false
'He tried to not sing falsely.'

(10) *Norwegian*

a. Ikke gå!
not go.IMP

b. Gå ikke!
go.IMP not
'Do not go!'

Finally, variation between V2 and non-V2 orders are found in *wh*-questions in some dialects of Norwegian. Two examples from the Nordic Dialect Corpus (Johannessen et al. 2014) are given in (11).

(11) *Northern Norwegian, ballangen02uk*

a. Kenn så e trænærn dåkkesj?
who COMP be.PRS trainer yours
'Who is your trainer?'

b. Kem du spelle fottball i lag me?
who you play.PRS football together with
'Who do you play football with?'

The word order variation in *wh*-questions is the focus of **Paper II** but will also be discussed in the other papers in this dissertation. In the next chapter,

[2] See also Vangsnes & Johannessen (2019) for a detailed investigation of the acceptance and variation of/between the two word orders NEG > V_{inf} and V_{inf}) > NEG in Norwegian.

I will discuss two factors that influence word order variation and review how optionality is accounted for in different frameworks.

Chapter 5

Topics in variation

Every speaker's output contains, at least on the surface, variable patterns: alternative ways of saying the same thing (Labov 1972). This variation is often highly structured by speech situation, pragmatics, and semantics. But it is unclear if all variation induces meaning differences.

Variability in the morphophonological domain is perhaps the most well-known, but we find variation in language at all levels, including syntax. Linguistic and sociolinguistic research has shown that many different factors induce systematic variability, including situational context, illocutionary force, linguistic context, discourse context, and production planning (Ellis 1999: 464). The variable word order patterns that are the basis of this dissertation (see (3)–(6) in Chapter 1) are syntactic alternations between linguistic forms that can potentially be affected by all sorts of sources of variation in language. In this chapter I will discuss some of these factors, and furthermore discuss how linguistic theory handles variation in the grammar.

5.1 Some sources of variation

Synchronic variation and diachronic change are often directly related. Specifically, synchronic variation is often the source of linguistic change (Kay 1975; Weinreich, Labov & Herzog 1986). On the other hand, diachronic changes may result in synchronic variation (Labov 1965). Variation affected by change is especially relevant in the discussion of embedded V2 in North Germanic, particularly in Faroese, where the status of embedded clause verb placement is still discussed. That is, although the loss of independent V-to-I movement has been completed in Mainland North Germanic (Falk 1993, Vikner 1995, Sundquist 2003), it is unclear if this is the case for Faroese or if this language change is still ongoing. Word order variation in Faroese embedded sentences might very well be partly explained as a consequence of language change with two competing forms available in the grammar. The variation in Norwegian main clause *wh*-questions is similarly unstable in the sense that different Norwegian dialects allow non-V2 in different sub-types of *wh*-questions (Westergaard et al. 2012, 2017; **Paper II**).

In addition to diachronic change, language contact can clearly cause and affect variation. A relevant example of this is described in Nilsen (1996), who describes word order variation in *wh*-questions in a dialect of Northern Norwegian (Sappen/Nordreisa, Nord-Troms). While most Northern Norwegian dialects allow non-V2 only when the *wh*-element is monosyllabic, non-V2 in this dialect is allowed across all types of *wh*-questions. Nilsen argues that this is the result of language contact with Kven and Sámi. It is possible that language contact plays a role also in the ongoing chance in Faroese embedded verb placement (Petersen

2010; Heycock et al. 2012: 594). Faroese and Danish are both official languages on the Faroe Islands. Faroese speakers learn Danish in school and are exposed to Danish via media and other popular culture, and all speakers are proficient Faroese-Danish bilinguals (Petersen 2010: ch. 4).

Though it might not traditionally be seen as a case of language contact, the influence of a (written) standard language on local dialects may also play a role in synchronic variation. In cases of syntactic variation, the variants are often linked to different registers or styles: i.e., written vs. spoken language, or formal vs. informal registers. In the sociolinguistic variationist field, phonological or phonetic variation is often linked to specific registers. But such links are perhaps less obvious in syntactic variation. In his discussion of variation in Norwegian *wh*-questions, Taraldsen (1986) however proposes that only the non-V2 word order is part of the dialect. When dialect speakers optionally produce *wh*-questions with V2 word order, this should be attributed to the fact that "most dialect speakers are 'bilingual"', i.e. they speak and are influence by Standard Norwegian (1986: 25).

Nordgård (1985) does not make this absolute distinction but does argue that both non-V2 and V2 order is acceptable in *wh*-questions because of influence from standard Norwegian. The interplay between the local dialect and the standard (written) language is addressed in **Paper III** where we set up an experiment to identify if the variable verb placement patterns which are the focus of this dissertation, break down into categorical patterns in different registers.

Concluding, it is an important to keep in mind where in a system we think variation is more exactly. Is there variation within a language, or can we determine that the variation is between different varieties? Or is the variation located within a variety grammar? Or is the variation even within the speaker (the individual's grammar). It is only in the last case that we are dealing with truly intrapersonal variability.

5.2 Conditioning variation

Usually when we think of linguistic variation, we mean that there are two or more ways of 'saying the same thing'. It is often quite clear that we are in fact saying the same thing when we deal with morphophonological variation such as the alternation between *walking* and *walkin'* in spoken English. However, the fact that two variables have the same semantics, does not mean that they can have the same social meaning (Lavendara 1987). Different linguistic variables can be associated with e.g., age, gender, race or geography and speakers may have social motivations to use certain variants.

With variability at the syntactic level, the idea that speakers are somewhat unaware of the (social) meaning of the different variables becomes less reliable. Speakers tend to be more conscious of the choice between grammatical alternatives at this level. I have already discussed (in Section 3.2 and Chapter 4) the finding that (embedded) V2 is often connected to some notion of assertion such as e.g., illocutionary force (Truckenbrodt 2006; Julien 2015, 2020) or 'Main

Point of Utterance' (Simons 2007, Wiklund et al. 2009, Jensen & Christensen 2013). Yet, for the word order variation in Norwegian *wh*-questions, imperatives and the variable placement of certain focus-sensitive adverbs (see examples (8)-(11) in Chapter 4), it is unclear if there is a semantic difference between the word orders. For *wh*-questions, speakers often report that both word orders are equally grammatical and acceptable (e.g., Vangsnes 2007, Westendorp 2017). I discuss the semantics of both patterns further in **Paper IV**.

Even if there is no clear semantic aspect to syntactic variation, variable patterns are still often highly structured. It has been argued that even in cases where multiple, semantically equivalent, options are available, speakers are rarely free to make a choice between alternatives (Capelle 2009). Patterns that on the surface seem truly variable, are often found to be highly structured when we look at a big enough data set, i.e., they might be conditioned by speech situation or subtle semantic features. This conditioning often appears to be probabilistic rather than deterministic, and it is hard to find instances of true optionality (i.e., a many-to-one mapping from meaning to form).

Example of such probabilistic factors, which perhaps fall outside the conscious choices of the speaker, are prosody and information structure. Westergaard (2005) argues that word order choice in Norwegian *wh*-questions is dependent on information structure. Specifically, according to Westergaard "non-V2 word order is preferred if the subject is informationally given, while V2 is chosen if the subject conveys new information" (2005: 271). Rice & Svenonius (2002) propose that the word order variation seen in *wh*-questions in the Tromsø dialect of Norwegian is governed by prosody. They propose that the syntax in this dialect provides two possible structures (one V2 and one non-V2) and that these structures are checked for phonological well-formedness. Using a variety of Optimality Theory constraints, Rice and Svenonius describe a grammar that picks out the optimal candidate in the interaction between syntax and phonology. The influence of prosodic factors on the word order choice in Norwegian *wh*-questions will also be discussed in **Papers II** and **IV**. Other examples of word order alternations in North Germanic that have been claimed to be prosodically conditioned are (long) object shift (Holmberg 1999, Josefsson 2010) and pronoun placement in Danish (Josefsson et al. 2017).

5.3 Variation within or between grammars

It is a theoretical question where in the grammar we should build in variable patterns. Given the assumptions of generative grammar, variation in the syntax is often seen as a reflection of multiple grammars within a member of a speech community. A famous example of such a theory is Roeper's 'Universal Bilingualism' (1999). Roeper argues that every speaker is in a way bilingual in that they have a set of mini grammars for different domains. Switching between these grammars is what accounts for syntactic variability. The grammar in Roeper's view is fully deterministic. Lightfoot (1999) similarly argues that individual grammars do not have alternations of the free type. Instead, Lightfoot

claims that such alternations are displays of diglossia where speakers have access to two grammars (see also Kroch 1989, and recently Eide & Åfarli 2020).

Probabilistic approaches, unlike deterministic approaches, build in optionality as a central component of the grammar. Such approaches have been a part of phonetics and phonology for a long time, e.g., Labov's (1972) formalisation of 'variable rules', and recently Partially Ordered OT (Anttila 1997), Stochastic OT (Boersma 1997), and Harmonic OT (McCarthy 2000). In syntax, Bresnan's (2007) probabilistic syntax is an obvious example of a theory that incorporates optionality. It seems to me necessary to build probability into the grammar, especially since as these probabilities seem to be sensitive to fundamentally non-grammatical properties (e.g., properties of the speech act, presuppositions, see discussion above).

It is however a matter of definition what is regarded as a 'grammar'. If we observe variation only in one specific domain of the grammar whilst the social meaning, lexicon, phonology etc. remains the same, can we then really speak of different grammars? That is, the observed variation may be better described as a within-grammar choice of a specific realisation of a variable. I return to this discussion in **Paper III** where we set out to test the variability-as-code/grammar switching approaches discussed above.

Chapter 6

Rationale, research contribution and general methodology

In the previous chapters, I sketched the state of the art of the literature concerning Verb Second, zoomed in on verb placement possibilities in North Germanic, and reviewed ways in which the literature has dealt with variable patterns. The four articles in this dissertation address the topics touched upon in these background chapters in more detail. In the papers I detail the production of variable verb placement patterns in varieties of North Germanic, possible ways to account for this variation, and how to unite these variable patterns within a V2 system. In the following chapter I will outline the rationale behind my line of research, the contribution this dissertation aims to make to the research field, and discuss the methodology of the four articles.

6.1 The knowns and unknowns of variable V2

For decades the Verb Second property has been theorised as a macro-parameter within the traditional generative framework. It has become increasingly clear however, that there is a lot of variation within V2 systems. Exceptions to the standard V2 pattern first described by Koster (1975), Den Besten (1983), have been found in many V2 languages both in main and embedded clauses. In Norwegian, a range of different constructions allow both V2 and non-V2. I have pointed out in Chapter 4 that there is variation in main clause *wh*-questions, embedded assertive clauses and with certain adverbs. The cases of variation within a language or variety, and even within speakers, challenge the parameter view of V2, and some unpacking of Verb Second as a unified phenomenon is clearly needed. This idea is not new, and it has been argued that V2 needs to be decomposed in several ways (e.g., Weerman 1988, Westergaard 2009ab, cf. Section 3.3). If we want to maintain that Norwegian, and North Germanic is V2, an account of V2 must be able to handle the observed variation.

6.2 Research questions

The aim of this thesis is to investigate variable V2/non-V2 verb placement patterns in varieties of North Germanic, and how to integrate these into a V2 system. The thesis specifically addresses the question: *How do we account for variable patterns within a V2 system?* By conducting direct comparisons of different North Germanic varieties, I aim to shed light on the nature of this variation and different V2 systems. More specific research questions that I will address in the four articles are:

- What is the distribution of V2 and non-V2 across different main and embedded clauses in Norwegian? [**Paper I**, **II**]
- What triggers or allows non-V2 in some environments? Or alternatively, what relaxes V2 in some environments? [**Paper II**, **IV**]
- What does the distribution of these patterns tell us about the nature of syntactic variation and hence the architecture of the grammar? [**Paper III**]
- What sort of analyses can be used to account for this variation? [**Paper IV**]

6.3 Research contribution

The thesis is a contribution to the field of North Germanic syntax, and theories of the Verb Second phenomenon. Of course, this is a vast topic, and most of the articles in this dissertation focus on Norwegian, though comparing the verb placement patterns in Norwegian with those found in the other Mainland North Germanic languages. Verb placement in Icelandic is not covered by this thesis and I address the language only in relation to earlier stages of Mainland North Germanic as well as present-day Faroese. This thesis has two empirical goals: to describe the verb placement variation in North Germanic, and to account for this variation within a V2 system. The main finding of this dissertation is that there are pockets of unstable verb placement in both main and embedded clauses in Mainland North Germanic. There are not only main clause word orders in embedded clauses, but also embedded clause structures in main clauses. This variation is found within-speakers and within-grammars. To account for the unstable patterns we observe, we must revise our understanding of verb placement in MNG. I present an account of main and embedded clauses in Mainland North Germanic, including Faroese, that is able to accommodate optionality, and not just a typological parameter setting.

I will now briefly outline the four articles and relate them to the research questions above. A more in-depth exploration of the results from the articles will be given in Chapter 7. The first two articles in this dissertation are largely descriptive, aiming to provide an overview and understanding of the variation present in Norwegian and North Germanic. In the third article, the bigger question of situating optional patterns in the grammar is addressed. The final article introduces a formal account of V2 and the attested variation.

In **Paper I** variable V2 patterns in Norwegian main and embedded clauses are investigated. Using an experimental elicitation paradigm, I test the production of V2 and non-V2 orders in *wh*-questions, in main clauses with preverbal adverbs and in different embedded contexts to map out the variable verb placement patterns in Norwegian. Acceptability judgement data testing V2 and non-V2 orders in different types of Norwegian main clause *wh*-questions are used in

Paper II to examine the development of different main clause non-V2 grammars across dialects. **Paper III** addresses the problem of where to situate optionality in the grammar. Specifically, it aims to test if V2 optionality is conditioned by register. This is done by testing variable word order in elicited production but varying the elicitation mode between written standard Norwegian and local spoken dialect. Finally, **Paper IV** delves further into patterns of unstable verb placement in North Germanic, specifically in Faroese and the Sogn dialect of Norwegian, and proposes a structure of the Mainland North Germanic C-domain that can better account for varying verb placement in these varieties.

6.4 Methodology

As generative linguists, our object of study is the linguistic competence (I-language), rather than performance (random exemplars, E-language) (Chomsky 1986). As we do not have direct access to linguistic knowledge, we must instead draw conclusions from performance. Theoretical linguists within the generative school have traditionally relied mostly on (their own) linguistic intuitions to support their theoretical notions. However, since Labov (1972), it has been known that judgements are often unreliable indicators of linguistic competence. In Labov's view, language should be studied by closely and directly examining data of everyday speech. Labov stresses that judgements about language are a psychological behaviour and these intuitions are less regular and more difficult to interpret than speech (1972: 199). Studying language in its social context, not limiting oneself to (one's own) judgements, will not only greatly increase the amount of available data, but is crucial for choosing which one of many possible analyses is right. It is no use basing a theory on intuitions if no one else shares them.

Others claim that the common belief that linguists always ask a single informant about the acceptability of a few sentences is a "caricature of linguistic methodology" (Sprouse & Almeida 2017: 43) and that acceptability judgements, even with small sample sizes, are reliable, robust, and replicable. In support of this claim, Sprouse and colleagues test sentences from linguistic textbooks and journals using a large sample of naive participants and show that these have a minimum convergence rate of 95% (Sprouse & Almeida 2012, Sprouse et al. 2013).

The empirical goal of this dissertation is to provide an overview of several known variable syntactic patterns in North Germanic, focusing on the placement of the verb in main and embedded clauses. To achieve this goal, I set out to systematically, and from a variety of North Germanic languages, collect production data of clauses where the literature has shown possibilities for variation in verb placement. In addition, various experiments were designed that aim to get a better understanding of the linguistic and extra-linguistic factors determining word order choices in variable systems.

The articles in this dissertation employ a variety of methodologies to test linguistic hypotheses:

- acceptability judgements (**Paper II**and **IV**)
- production data from spoken corpora (**Paper II**)
- elicited production (**Paper I**, **III**, **IV**)

All these methods have advantages and drawbacks. Acceptability judgement tasks are reliable, easy to conduct and allow us to test negative data but will likely not give information about prosodic patterns (unless perhaps when the stimuli are presented auditorily). Moreover, these tasks and not necessarily suited to examine the effect of register and semantics either. Language corpora often contain information about register and in the case of spoken corpora also prosody, but for the syntactic patterns that I am interested in, corpora are likely to never have enough data for asking fine-grained questions about syntactic variation (e.g., questions on inter- and intraspeaker variation). Stating generalisations about the acceptability of syntactic patterns at a micro-level is understandably difficult, and native speaker judgements can therefore be conflicting.

Collecting many observations to test our linguistics theories on, is of descriptive and empirical importance when investigating more fine-grained syntactic variation in closely related language varieties (cf. Barbiers & Cornips 2000; Cornips & Poletto 2005, 2007). Experimental methods are a great way to do so. In three of the four articles in this dissertation, I make use of elicited production to collect relevant linguistic examples. Eliciting production allows us to collect data on constructions that are not frequent in natural settings, and to elicit variables that do not normally or often show up in interaction with each other. It is also easier to control extraneous factors that may influence the variable of interest. There are of course also clear disadvantages to this methodology, and it is important to keep in mind possible task effects. One needs to be sure that participants correctly understand the task as intended, but also to be aware of a repetition effect or standardisation especially when dealing with local varieties (see Cornips & Poletto 2005: 953f.; **Paper I** and **III** in this dissertation for discussion). It is however indisputable that collecting dialect data using different elicitation techniques can help achieve greater observational and explanatory force (on methodology in experimental syntax see Schütze 2016 [1996], Cornips & Poletto 2005).

It is likely that some of the unstable patterns that this dissertation aims to describe, are (partly) the results of an ongoing change. Studying modern language change in real-time is often not feasible, but comparing younger and older speakers cross-sectionally can be a useful alternative method to investigate diachronic change. The idea behind this so-called 'apparent-time' paradigm is that synchronic variation between age groups may be due to an ongoing language change. I make use of this method in my study of word order in Norwegian *wh*-questions (**Paper II**) and Faroese embedded verb placement (**Paper IV**).

6.5 The Nordic Word order Database

In addition to the submitted work, I have spent a large part of the last few years as part of a project group headed by Ida Larsson (University of Oslo) which has developed the Nordic Word order Database (NWD) (Lundquist, Larsson, Westendorp, Tengesdal & Nøklestad 2019). The database is part of the project 'Variation and Change in the Scandinavian Verb Phrase' funded by the University of Oslo and the Research Council of Norway (PI: Ida Larsson, project no.: 250755). The NWD is an online database hosted by the Text Laboratory at the University of Oslo. It contains elicited production data from speakers in all the Nordic countries: Denmark, Faroe Islands, Iceland, Norway, Sweden, and Swedish-speaking parts of Finland. The dataset includes material targeting a large range of syntactic constructions (e.g., subject placement, Object Shift, particle placement, verb placement) that are known to show variation within and/or between the languages. Many of the investigated phenomena in the database are infrequent in spontaneous production. By using systematic elicitation, we have an opportunity to investigate both inter- and intraspeaker variation. The database contains over 70.000 observations from 393 speakers. All the elicited material has been (semi-automatically) transcribed and annotated for word order. These annotations as well as the audio material can be accessed in the online database. An overview of the database and its empirical scope as well as the rationale behind it, and the methodology of data elicitation and analysis is provided in Lundquist et al. (2019).

Three of the articles in this dissertation (i.e., **Papers I**, **III** and **IV**) were developed out of the NWD-project and make use of the experimental setup from the NWD and the material collected therein. The elicitation paradigm for these articles was developed by Björn Lundquist and me. In addition, in collaboration with Björn Lundquist I have developed annotation methods and scripts that process the experimental data into the database.

6.6 Further methodological considerations

As all research involving human subjects, the studies carried out in this dissertation adhere to the ethical rules and regulations of such research in Norway (NESH 2016). Consent and privacy are cornerstones of ethical research practices. These are crucial issues to consider in any research, but especially important in the Nordic Word order Database project due to the online availability of the data. The database contains elicited spoken data in the form of audio material. Protection of privacy is related to the processing of personal data, and linking of persons to such data is usually connected to the storing of personal data such as names, national identification numbers or e-mail addresses, or by compiling background data (NESH 2016: 8). Individuals might also be linked to their spoken production since the voices of the participants are accessible, not just the transcribed and coded utterances. To guarantee the personal integrity and privacy of the participants, all the data is anonymised, and personal data is

only available to the PI of the project. Furthermore, the set-up of the NWD-experiments limits the type and amount of speech that is collected so that it, ideally, does not contain any identifiable information. We ensure this by eliciting data in rigid experimental tasks that prompt the production of specific target structures. As such, the data we collect is in principle non-sensitive, and issues of privacy primarily come in because of the online availability of the materials. As an extra measure, the sound clips that are available online are segmented out of the original recording to ensure that no material not relevant to the research is published openly. We cannot completely escape the possibility that voices are nevertheless linked to individuals, especially when additional metadata on the speakers is available on the same platform. We estimate that only participants from the same community might recognise each other's voices or link an individual to a data point based on the available metadata, but it is unlikely that other users of the database will be able to do so.

Participants have been asked for their consent on the online availability of the audio and metadata and had the possibility to participate in the experiment but opt-out on their data being made available online. Speakers must be 16 years of age to participate in the experiment (or have the consent of a guardian) and have had the option to opt-out of participation and/or the database at any moment.

Chapter 7

Summary of results

This chapter presents a summary of the results from the articles in this dissertation. The theoretical implications of these results will be discussed in the next chapter.

7.1 Paper I: Variable Verb Second in Norwegian main and embedded clauses

The first article sets the stage for the other articles in this dissertation by presenting an overview of the distribution of V2 and non-V2 across different main and embedded clauses in Norwegian. I focus on three constructions that allow variation with respect to the position of the finite verb in Norwegian: main clause *wh*-questions, a subset of embedded clauses, and declarative main clauses with preverbal adverbs. The data presented in **Paper I** were collected using a set of three elicited production experiments, which were conducted with a total of 107 participants in Tromsø, Northern Norway. I show that variation between V2 and non-V2 word order is indeed present in the three constructions studied. Almost all speakers show intraspeaker variation in main clause *wh*-questions (which are optionally produced with non-V2 word order), assertive embedded clauses (optional V2 order), and with preverbal adverbs (which may occur in clause-second position). The embedded clause condition included assertive, factive and interrogative complements. I show that the percentage of V2 orders produced was, as expected, affected by the assertiveness of the complement. More specifically, there were less embedded V2 (EV2) orders produced in both factive complements (4.4%), and in interrogative complements (2.8%), than in assertive complements (11.2%). I also, more surprisingly, find an effect of Adverb on the production of EV2: embedded V2 was produced more often with the adverbs *ofte* 'often' and *alltid* 'always' than with *aldri* 'never' and *ikke* 'not'. This pattern is reminiscent of observations made in the literature on Faroese, Northern Norwegian and Kronoby Swedish, and I discuss a few different possible analyses that can account for the differing possibilities with respect to verb movement with the various adverbs.

I conclude that 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 syntax proper, (i.e., the root properties (±main) of the clause), word order in Norwegian is more flexible in the interplay with pragmatics: the percentage of V2 word orders produced in both main and embedded clauses increases when the clause is assertive (and vice versa). This is a by now uncontroversial statement for embedded clauses, but I argue that it

can also apply to main clauses in Norwegian: declaratives are always V2, while word order is variable in *wh*-questions.

Paper I also references research done in **Paper III** and Section 5 of **Paper I** can be seen as an academic update to the earlier published research.

7.2 Paper II: Word order variation in Norwegian *wh*-questions

In this article I study the possibilities of having non-V2 word order in main clause *wh*-questions across Norwegian dialects. Using acceptability judgement data from the Nordic Syntax Database (NSD; Lindstad et al. 2009) from 409 informants across 105 locations, I test the acceptability of non-V2 word order differs across Norwegian dialects and show, uncontroversially, that the acceptability of this order is dependent on the complexity of the *wh*-element (short or long, e.g., *ka* 'what' or *kas bil* 'which car') as well as its function (i.e., whether it is the subject of the clause or not). I show that there are four different micro-grammars for *wh*-questions across Norwegian dialects: some dialects allow only V2 word order while others allow non-V2 word order across all *wh*-questions; there are also dialects in which non-V2 is available in all but long non-subject *wh*-questions; or non-V2 order is only possible with short *wh*'s. An apparent-time study of the data, comparing the judgements of older (50+ years) and younger speakers (15–30 year old), supports a diachronic connection between some but not all of the varieties.

I also set out to test a theory of the starting point of non-V2 order in this construction, i.e., Westergaard, Vangsnes & Lohndal (2012, 2017) propose that the loss of the V2 requirement is related to changes in the properties of the complementizer *som* and accordingly started in subject *wh*-questions where *som* occurs in the second position when that is not filled by the verb. I find no evidence in the analysis of the NSD-material for a micro-grammar that allows non-V2 in subject *wh*-questions only. In addition to the acceptability judgements, I searched the Nordic Dialect Corpus (Johannessen et al. 2009) for examples of non-V2 *wh*-questions. The overwhelming majority (76.4%) of the examples started with a short, non-subject *wh*-element. The relative infrequency of non-V2 subject *wh*-questions is again disjoint with the hypothesis by Westergaard et al. (2017) that non-V2 starts in subject *wh*-questions.

7.3 Paper III: Code-switching cannot explain intraspeaker syntactic variability

Whereas the first two articles in this dissertation provide a more descriptive account of the available variable syntactic patterns in Norwegian, **Paper III** addresses what the distribution of these variable patterns tells us about the nature of syntactic variation and the architecture of the grammar. It addresses the larger theoretical and empirical question if such variable patterns are best modelled as switching between different registers/grammars, or as underspecified

mappings from form to meaning within one grammar. Even though syntactic variation (in contrast to phonological/phonetic variation) does not commonly have obvious links to special registers, we consider the possibility that the optionality we observe in main clause *wh*-questions, with preverbal adverbs and in assertive embedded clauses, breaks down to categorical patterns in different registers (spoken vs. written or dialect vs. standard). We test this by examining a large range of phonological, morphological, lexical, and syntactic variables in two elicited production experiments (6.000 observations from 26 speakers), one using standardised written language and one using spoken dialect as the elicitation source. As we find no indication of switching between registers, while at the same time observing variation in word order patterns, we take these results to indicate that variation cannot be fully conditioned by sociolinguistic factors. In conclusion, the syntactic variability cannot be accounted for using a code-switching hypothesis. Instead, optionality must be available within the grammar.

7.4 Paper IV: Unstable verb placement and the North Germanic CP

In the first three articles, we have observed that it is possible both to have embedded structures in main clauses (i.e., Norwegian *wh*-questions) as well as main clause structures in embedded clauses (i.e., EV2), and that this syntactic variability must be grammar-internal. In **Paper IV**, we discuss how we can best deal with such variable patterns within a theory of Verb Second. We look specifically at two data patterns: embedded Verb > Adverb in Faroese and Mainland North Germanic and *wh*-questions in the Sogn dialect of Norwegian. Both sets of data show variable patterns in verb placement within the language as well as within speakers. We isolate two kinds of information that can be non-categorically correlated with choice of verb height: assertability factors (Faroese), and prosodic factors (Sogn).

The main claim of the paper is that the placement of the verb in Mainland North Germanic is less strongly linked to the main/embedded distinction than usually thought. We argue instead in favour of an account of Mainland North Germanic verb movement that is completely symmetric: embedded and main clauses are of the same size, and regular *that*-clauses are structurally identical to subject-initial main clauses, apart from the position of the verb. In our analysis we build on Julien's (2015) approach to the MNG C-domain as we assume that the complementizer is outside of the minimal CP-structure. As a result, the C head is available for typical V2 movement, with specCP available for the initial clause element; if the verb remains low, it stays in vP.

We describe a system of Mainland North Germanic verb placement where verb position is not fully grammaticised or categorical. In our view, the verb placement variation in Faroese embedded clauses and Norwegian main clause *wh*-question are correlated with semantics. This variation is further modulated by prosody in the case of Sogn Norwegian. Mainland North Germanic is seemingly

moving towards a verb placement system where the C position (in both main and embedded clauses) is associated with clause-independence and assertion, and the v position is associated with non-finiteness, dependence, and non-assertion.

Chapter 8

Findings and implications

8.1 Research problem

In this dissertation I have investigated the distribution of main and embedded structures in North Germanic, more specifically in Danish, Faroese, Norwegian and Swedish. These languages are all Verb Second (V2) languages in the sense that the finite verb is obligatorily the second constituent in finite main clauses. Despite this generalisation, pockets of variable verb placement are found in these varieties. At the start of this dissertation, I presented four constructions in North Germanic that show variation in the placement of the verb: subject and non-subject *wh*-questions, main clauses with preverbal adverbs and assertive embedded clauses. I then asked the question: *How do we account for these variable patterns within a V2 system?*

8.2 Major findings

The four articles in the dissertation have delved deeper into the variable patterns of V2. I demonstrated that deviations from the standard asymmetric V2 pattern of Mainland North Germanic – V2 in main but not embedded clauses – are produced and accepted in main as well as embedded clauses. At first it might not seem clear how these patterns are connected. Yet, both the variation in main clause *wh*-questions and the variation in embedded clauses are examples of variation in the placement of the verb in *v* or in *C*. **Papers I** and **III** also examined variable word order in main clauses with preverbal adverbs, but I disregard this variation in my discussion here as it seems clear that this variation is of a different kind. In clauses with preverbal adverbs, subject–verb inversion is still licit and therefore the non-V2 word order is not a result of a lack of verb movement.

If we view the results from all four papers together, there are some clear observations to be made. First, the non-standard word orders (i.e., non-V2 main and V2 embedded clauses) are never preferred. We see this in the production data from Sogn in **Paper IV** where no syntactic, prosodic or lexical factor actually favours non-V2 word order in main clause *wh*-questions. In addition, the Faroese participants in the acceptability judgement task in **Paper IV** overall rate the test items with verb movement lower than those where the verb remains *in situ*. And furthermore, we can observe that embedded V2 word orders are hardly produced, especially in Danish and Swedish, even in clearly assertive contexts where the literature hypothesises that this order is felicitous (**Paper I** and **IV**).

Second, in both main and embedded clauses, the variation we find is within individuals (except perhaps EV2 in Danish and Swedish, where we hardly find any variation at all). We see this most clearly in the production of embedded V2 orders in Faroese in **Paper IV** and in main clause *wh*-question in the Sogn data in the same paper. We also find intraspeaker variation in the production of embedded V2 orders (especially with the adverbs *ofte* 'often' and *alltid* 'always') in the Norwegian production experiment discussed in **Papers I** and **III**. In this experiment, we also observe that the majority of the speakers produce both V2 and non-V2 *wh*-questions.

Moreover, the results of the embedded V2 production task in **Paper IV** show that different languages have different levels of optionality in exactly the same contexts. That is, speakers of the four languages tested in this paper (i.e., Danish, Faroese, Norwegian and Swedish) produced V2 orders in assertive embedded clauses to various degrees. This seems particularly clear from the fact that these data are collected in a controlled experimental context, where the test items were the same across languages and the semantics of the stimuli always remains the same. In **Paper I** I hypothesised that the different North Germanic varieties may have slightly different EV2-systems (in the sense of Gärtner 2019), with Faroese and Norwegian having a 'broader' EV2-type, allowing Verb > Adverb strings in more environments than Danish and Swedish. However, as suggested in **Paper IV**, it seems more likely that what guides movement to C might be language specific. In the sense that the factors that motivate EV2 movement are not the same across varieties, or at least not weighted the same.

Third, the study in **Paper III**, which tested the production of variable patterns using two elicitation methods, showed that we have to account for the observed intraspeaker variation in verb placement within one grammar as a within-grammar probabilistic choice of a specific realisation. We reached this conclusion because speakers show syntactic optionality in their production patterns without, at the same time, varying any (morpho)phonological patterns.

Finally, in **Papers I** and **IV** I discussed how the verb placement variation in both main and embedded clauses seems to be correlated with (some) semantic notion of assertion. That is, V2 word order is stable in assertive main clauses, but there is variation in non-assertive main clause contexts, i.e., *wh*-questions. And on the other hand, non-V2 word order is stable in non-assertive embedded clauses (e.g., relative clauses) but more variable in assertive embedded clauses. I repeat Table 10 from **Paper I**/Table 1 from **Paper IV** which illustrates this interaction below. In **Paper IV** I also show that verb placement in *wh*-questions in Sogn Norwegian is further modulated by prosody, an option which I allude to in **Paper II** too.

Guided by these results, the central aim of **Paper IV** was to present an a account of verb placement that can handle the observed variation in Mainland North Germanic. It is clear that the classic account of V2, based on the complementary distribution of complementizers and finite verb raising (which works well for Dutch and German), cannot account for the Mainland North Germanic patterns. As discussed in the paper, several accounts of embedded clause V2 have been proposed in the literature recently which are a clear

Table 8.1: A verb placement system based interaction of ±main and ±assertive.

	+ ASSERTIVE	- ASSERTIVE
+ MAIN	**V2 order**	variable word order
	(declaratives)	(*wh*-questions, imperatives)
- MAIN	variable word order	**non-V2 word order**
	(assertive complements)	(embedded quest., relative clauses)

improvement of the classical V2 analysis and which can handle the North Germanic data much better (e.g., Wiklund et al. 2009, Eide 2011, Julien 2015, Vikner 2017, Nyvad et al. 2017). However, these accounts seem to underestimate the amount of variation found within the same language and within the same speaker. It is clear that we instead require an account that is able to accommodate optionality.

The account put forth in **Paper IV**, has in common with Julien (2015) and Nyvad et al.'s (2017) accounts that semantics is driving the variable verb placement (at least in embedded clauses). We disagree on whether or not the semantics should be encoded in the syntax. Because of the observed variability, we argue that it cannot be the case that verb position in these languages is grammaticised, whether in terms of the size of the complement, or in terms of features in the C-domain. As an alternative, we propose a uniform phrase structure underlying both main and embedded clauses in all Mainland North Germanic languages where verb height is non-categorical. By contrast, the position of the verb is categorical in Dutch and German (high/low based on the ±main distinction) and in Icelandic on the other hand (high for +finite, low for -finite).

If this account rings true, it might be the case that the complementary distribution of verb movement and complementizers in Dutch and Germanic is not necessarily the result of both elements competing for the same position either. Instead it might be the case that the verb has grammaticised low and that that is co-linear with having an overt complementizer in German. In this way, verb placement in "well-behaved" V2 languages can be consistent with our account: in these languages, an assertability/embeddedness factor/feature has become grammaticised to keep the verb low in embedded clauses (and high in main clauses).

The notion of assertion used in **Paper IV** is arguably very imprecise and much more carefully defined and tested in previous literature. However, scholars have strongly disagreed on how to best characterise the exact semantics that co-occurs with high verb placement in North Germanic embedded clauses. Why assertion and high verb placement are linked is not clear either, but I want to tentatively put forth the possibility that assertability may be linked to the vague pragmatics of quotation: the more you mimic the main clause word order, the more it feels like the main clause subject is actually speaking. It is a separate question why it is the case that assertability semantics is associated with the verb being high, while non-assertability semantics tends to keep the verb low

and not the other way around. This issue remains outside of the scope of the current work.

8.3 Reevaluating Verb Second

Now, I return to the main research question of this dissertation: How do these variable patterns fit into our understanding of Verb Second?

The phenomenon of Verb Second has often been understood as a macro-parameter. I have argued above how the variable patterns (especially within-language and within-speaker) described in this dissertation challenge the parameter view and force us to unpack it. One alternative put forth in the literature has been to challenge the idea that V2 always uniformly manifests as V-to-C movement, but that it may instead target different positions in the extended C-domain. Lohndal et al. (2020: 786) suggest, for example, that the Norwegian finite verb may be in different heads depending on the clause type. For instance, the verb may be placed in C^0 (in subject-initial main clauses), as well as in various heads in the Left Periphery (e.g., Top and Foc). In **Paper IV**, it is extensively discussed why the stipulation of extra syntactic structure in cartographic approaches to V2 does not (better) account for the reliable external and internal syntactic consequences of V2 and non-V2 word order. In addition, any account in terms of highly abstract syntactic movements is not likely to fit the North Germanic data in an insightful way given the unconditioned variation and optionality.

Similarly, we could imagine a system where V2 effects are caused by a number of smaller rules in local domains. These rules may vary not only across languages and dialects, but also across clause types. This kind of analysis is proposed by Biberauer & Roberts (2012) for verb placement variation across languages, and also favoured by Lohndal et al. (2020) for Norwegian. I see no advantage to proposing a set of micro-parameters (Biberauer & Roberts 2012) or micro-cues (Lohndal et al. 2020; Westergaard 2009ab, 2014) for the variation described in this thesis. In my view, the variability and factors influencing verb placement within these languages is not grammaticised. The fact that verb height is not strictly encoded in the syntax is crucially what gives rise to a lot of variability and optionality. A more sparse clause structure is able to capture that. Yet, it is unlikely that the very templatic approach sketched in **Paper IV** can cover all the micro-variation found in the Mainland North Germanic varieties. Still, this approach of going back to a more sparse clause structure has the advantage of covering the main patterns in both main and embedded clauses.

It is important to note that variation or optionality is not incompatible with a formal syntactic system per se. Work by Adger and colleagues (e.g., Adger & Smith 2005, Adger 2006; see Adger 2016 for an overview) have proposed approaches to intrapersonal syntactic variability where variability can arise because of the way that interpretable and uninterpretable features combine syntactically. Approaches that incorporate variation are also standard in sociolinguistic practices (e.g., Tanner et al. 2017, Tamminga 2018, though no

such models are available for word order variation).

A different, but related question concerns the motivation for movement to C. In the literature this motivation is often accounted for by positing some feature-checking relation between the positions specCP and verb in C^0 or by requiring C^0 to be lexically filled. Such rules often take the form of language-particular stipulations of the requirement 'Move I to C'. The alternative that I propose in this thesis explains variation not in terms of different structures, derivations or features but as optional movements. By proposing a uniform structure for main and embedded clauses, we can unite the trigger for movement to C.

Another advantage of our uniform account is that instead of having different structures for different varieties of North Germanic (which may or may not be related to differences in morphology, such as analysed in the Rich Agreement Hypothesis (Kosmeijer 1986, Roberts 1985, Platzack & Holmberg 1989), the uniform account postulates no differences in the syntax, and instead predicts a closer relation between syntax and semantics. As a result, features in the syntax, i.e., word order reflects categories related to semantics or discourse.

8.4 Future research

There are some shortcomings to the research presented in this thesis, which at the same time make interesting directions for future research.

First and foremost, I have largely disregarded Icelandic in my discussion of verb placement in North Germanic. Though Icelandic verb placement is discussed in **Paper IV** to some extent, we have not empirically tested the possibilities for verb placement in the language. The comparisons that we have made, especially in the last paper, between Icelandic and the other North Germanic languages are therefore potentially misleading as they are based on data reported in the literature on the one hand, and new empirical data on the other. An Icelandic version of the embedded verb placement production experiment in the Nordic Word order Database project was set up, but we unfortunately only have data from a handful of speakers.

Within the Nordic Word order Database project, fieldwork in the (Fenno-)Swedish-speaking regions of Finland was also planned, but due to COVID-19 this has not yet been carried out. Specifically, it would be interesting to compare Fenno-Swedish verb placement to the results from Northern Norwegian and Faroese. In **Paper I** I mentioned that differences in embedded verb movement past negation in comparison to other adverbs have been described for the dialect of Kronoby (Northern Ostrobothnian). I similarly find an effect of Adverb on the possibility for verb movement in embedded clauses in Northern Norwegian and Faroese.

It would also be interesting to follow up on the acceptability judgement task in **Paper IV** with Norwegian speakers. The Faroese speakers showed very little difference in their judgement of assertive complements with high or low verbs, even though not all speakers produced the Verb > Adverb order freely. Based on previous research, we would expect Norwegian speakers to disprefer EV2, but

in the changing, variable verb placement system we sketched EV2 sentences to be more and more common and accepted.

Another compelling direction for future research is to further investigate the notion of assertability which underlies the variable system sketched in **Paper IV**. In the paper, we argue that whatever semantic factor is at play in assertability, it has not been grammaticised in any of the Mainland North Germanic languages or Faroese. This may well be the reason why the exact semantic context of EV2 has remained so vague, and a much debated issue, in the literature. As discussed in the final section of **Paper IV**, it might be that this notion can be described as the possibility of a more 'quotative' interpretation. Interestingly, the assertability of the embedded V2 clause seems to be correlated not with the speaker assertion, but the matrix author's assertive force, which ties in with the possibility of indexical shift in embedded V2, but not non-V2 clauses. It further seems probable that the exact semantic notion licensing Main Clause Phenomena in North Germanic can differ between varieties. It is most likely better understood as a cline, where the importance of this feature differs from language to language. Future research should further develop and explore these hypotheses.

Finally, future research might examine the prosody of the word order variation more. For example, we may further test to what extent the word order variation in *wh*-questions is indeed conditioned by prosodic properties. All the material in the Nordic Word order Database which has been collected in the experiments in **Papers I**, **III** and **IV** has been semi-automatically transcribed and may be fully acoustically analysed. Since these data were collected in a controlled experimental setting, the possible interfering effects of context and semantics are kept to a minimum. This will allow for the possibility of correlating word order choices with specific prosodic properties (length of the target elements, location of prosodic boundaries etc.). The project 'Experimental Approaches to Syntactic Optionality (ExSynOp)' funded by the Research Council of Norway (PI: Björn Lundquist, project no.: 302524) is currently investigating exactly this for argument placement in North Germanic.

8.5 Conclusion

The four articles in this dissertation have provided a solid descriptive base of the available variation in verb placement in North Germanic main and embedded clauses. I have connected the variable patterns in main and embedded clauses to one another, and furthered our understanding of how this variation is can be dealt with within the grammar. To account for the variation available in the grammar, this thesis has put forth a syntactic structure of North Germanic main and embedded clauses that builds in the possibility of variability and optionality. More generally, my aim has been to contribute to our understanding of Verb Second systems where word order is more flexible.

Papers

Paper I

Variable Verb Second in Norwegian main and embedded clauses

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Abstract

Standard 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. A wide variety of Norwegian dialects in addition allow deviations from the standard V2 word order in main clause interrogatives. Hence, the asymmetric verb second pattern seemingly breaks 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 V2 as 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.

I.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.PRES to radio.DEF in car.DEF every day
'Every day, I listen to the radio in the car.'

The subject need not always precede the verb though. If the first position in a declarative main clause is occupied by something other than the subject

(topicalization), the finite verb must immediately follow this constituent rather than the subject:

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

That is, 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 C-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). This $V_{fin} < Adv$ 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.PRS always/not on radio.DEF in 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 (4-a). Norwegian (as all the Mainland North Germanic (MNG) varieties) differs here from Icelandic and possibly varieties of Faroese, which are generally argued 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 (4-b).

(4) a. Jeg spurte om Anne alltid **hører** på radioen i bilen.
I ask.PST if Anne always listen.PRS to radio.DEF i car.DEF
b. Ég spurði hvort Anne **hlustar** alltaf á útvarpið í bílnum.
I ask.PST if Anne listen.PRES 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. This V2 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 say.PRS that she listen.PRS always to radio.DEF in car.DEF
'Anne says that she always listens to the radio in the car.'

Whereas the Icelandic word order in (4-b) 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).

Norwegian, unlike the other Mainland North Germanic languages, also displays deviations from the V2 pattern in main clauses. That is, non- V2 word order is possible in *wh*-interrogatives in many Norwegian dialects, as in (6-a) (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 (6-b), and is the only option in the Norwegian written standards Bokmål and Nynorsk.

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

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

(7) Æ rett og slett **ælske** marsipan.
I frankly love.PRS marzipan
'I frankly 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).

Together these constructions present an interesting case to explore what factors mediate word order variation within an otherwise standard V2 system. The word order patterns introduced above are much discussed in the literature on Norwegian specifically and North Germanic more generally. In this paper I intend to add to that 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 investigate some of the factors that have been suggested in the literature 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 this paper, I discuss how these Norwegian results compare to the verb placement patterns in other North Germanic varieties and consider the implications of this flexible verb placement for the analysis of the Verb Second phenomenon.

I.2 Variable verb placement in Norwegian

I.2.1 Optional V2 word order in embedded clauses

As discussed 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.PRS place.DEF where we always play.PST as child.PL.INDEF
'This is the place where we always played as kids.'

(9) Hun spurte meg [hvor du alltid **drar** i helgen.]
she ask.PST me where you always go.PRS in weekend.DEF
'She asked me where you always go in the weekend.'

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

(10) a. $[_{\text{CP}}$ sub V_{fin} $[_{\text{IP}}$ t_{sub} t_{V} $[_{\text{VP}}$ neg/adv $[_{\text{VP}}$ ... t_{V} ...
b. $[_{\text{IP}}$ sub V_{fin} $[_{\text{VP}}$ neg/adv $[_{\text{VP}}$ ... t_{V} ...

The possibility for 'embedded V2' (EV2) is by now well-established and the distribution of this phenomenon is much 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. There is no clear consensus on the exact characterisation of the contexts in which EV2 is possible. Relying on insights from Hooper & Thompson (1973), it is often 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[1], 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 generalisations on what are considered 'friendly' and 'hostile' environments for EV2 seem to hold for most varieties of Norwegian (see Wiklund et al. 2009) though 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[2], 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 regional dialects of Northern Norwegian[3] 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 **lånte** vanligvis penga til.
we wonder.PST on who he lend.PRS usually money to
'We wondered who he usually lends money to.' [Bentzen 2003:581]

Interestingly, type of adverb also seems to play a role in this variation. That is, the finite verb in these clauses in Regional Northern Norwegian can appear above sentence-medial adverbs but not above negation (Bentzen 2005:157–9). Bentzen further finds differences between the 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 compararison to other adverbs has also been found for the dialect of Kronoby (Northern Ostrobothnian) (Wiklund et al. 2007:216), and in acceptability judgements of Verb > Adverb orders in Faroese (Bentzen et al. 2009). For Faroese, like Northern Norwegian, the acceptability of Verb > Adverb in relative clauses further differs depending on the specific adverb: this word order tends to be rejected with adverbs *always* and *never*, but accepted with *ofte* (2009: 85). The differences in the acceptability of the verb preceding different adverbs have been linked to differences in the positions of these adverbs

[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 I.2.4 for further discussion of spoken and written standards in Norwegian).

[3]Crucially to this 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 the hierarchy following Cinque (1999). In the structural hierarchy of adverbs, always is merged in a relatively low functional projection, and often slightly higher. An explanation in terms of 'height' in Cinque's hierarchy is however 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.

I.2.2 Variable verb placement in Norwegian main clauses

As mentioned, variation in finite verb placement can be found in Norwegian 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). 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).[4] Not all adverbs can occupy this position, and other sentential adverbs including negation cannot occur preverbally (12b–c).

(12) a. Norge bokstavelig talt knuste Danmark i finalen.
Norway literally crush.PST Denmark in final.DEF
'Norway literally crushed Denmark in the final.'

b. *Norge dessverre knuste Danmark i finalen.
Norway unfortunately crush.PST Denmark in final.DEF
'Norway unfortunately crushed Denmark in the final.'

c. *Norge ikke knuste Danmark i finale.
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).[5] Subject-Verb inversion in non-subject initial clauses with preverbal adverbs (13) suggests that this is likely to be the case.

[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] Nilsen (2003: 81) contrarily 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.

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

I.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., 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 comes.PRS promptly
'Who never comes on time?'
b. Kor du alltid **drar** i helga.
where you always go.PRS 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 this 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 depends additionally 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).

I.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. Verb second in embedded clauses, at least in Mainland North Germanic, 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 a spoken language context.

Considering variation due to register presents an additional challenge when setting up an experimental study. It is a well-known task effect in dialectological

and sociolinguistic 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 of the language, 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 up to the Bokmål written standard, is conceived as a norm ideal (Mæhlum 2009). Sandøy (2009, 2011) however 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 even 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, as they write and read standardised written language as well as the local dialect (e.g., Språkrådet 2017, Vangsnes 2019a).

In this study, I examine the effect of elicitation mode on participants' responses, by comparing the outcomes of the 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 I.3.3.

I.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.[6] The study COMPrises of three experiments focusing 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 of this study developed successively, and conditions and items were therefore added, changed

[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 and UiT the Arctic University of Norway and focuses 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).

or removed in the different versions. Table 1 provides an overview of the set of experiments.

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

Table I.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. Though 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 elicited production tasks. 171 sessions were recorded with four groups of participants in Tromsø, Northern Norway. Note that two of the groups, i.e., C and D, took part in both Experiment 2 and 3.

I.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 (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	Exp.	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 I.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 Sámi). 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 variety of Trøndersk, 6 spoke a West-Norwegian dialect and 14 an East-Norwegian variety.[7] 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).

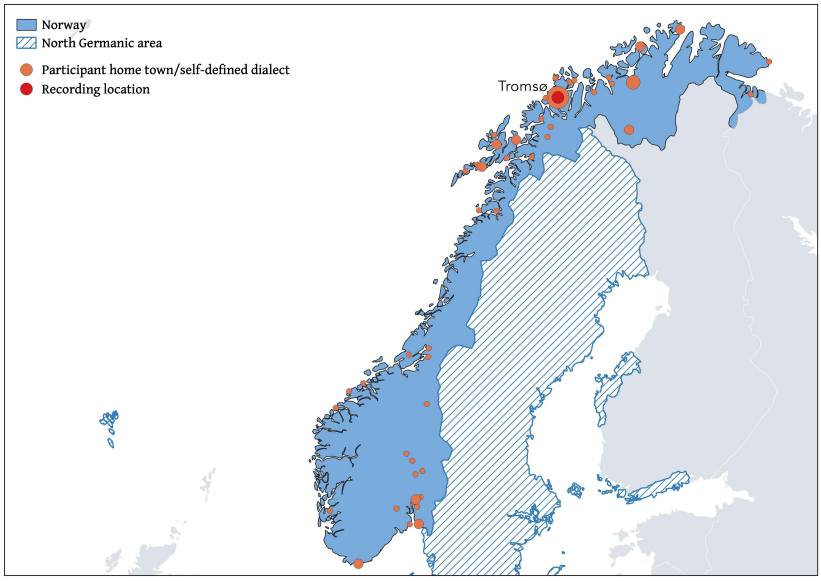

Figure I.1: Overview of hometowns/self-defined dialect of the participants.

I.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 (15–16a) 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 (15b), or just a proper name (16b). The participant is then asked to complete this utterance using the words from the background sentence (response in parentheses; optional placement in curly brackets).

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

(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 ...
c. (hun {kommer} aldri {kommer} for sent på jobb.) [response]
she comes never comes too late to work
'Marit says she never gets to work late.'

(16) a. Pål sa at han rett og slett hater lakris. [background]
Pål said 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 the main clause finite verbs, here with respect to the adverb *rett og slett* 'simply'.

I.3.3 Materials

I.3.3.1 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 I.A. I will now discuss the different conditions and subconditions used across experiments and provide examples of each.

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' in which EV2 is most 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')[8], and 3 different medial adverbs (*ofte*

[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

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

Table I.3: Build-up of the three experiments.

'often', *aldri* 'never', *alltid* 'always'). Experiments 2 and 3 also included items with the negative adverb *ikke* 'not'.[9] An example of this condition, here with a factive predicate, is given in (17) (variable placement in curly brackets).

(17) Pål er stolt av at ... han {oppfører seg} alltid {oppfører seg}
Pål is proud of that he behave REFL always behave REFL
bra på skolen.
well on school
'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

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.

clauses (or vice versa). That is, we expect a complementizer/relative marker to be produced in embedded subject *wh*-questions (see (18)), and 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 ... hva slags band {som} spilte på festivalen i
Anne asked what type bands that played on festival.DEF in
helgen.
weekend.DEF
'Anne asked what kind of bands played the festival this weekend.'

(19) Ole spurte ... (hvilke filmer {så} Pål {så} i går.)
Ole asked which films saw Paul saw yesterday
'Ole asked which films Paul watched yesterday.' [trigger & response]

(20) a. (Pål): Turen i morgen er avlyst.
(Pål): trip.DEF tomorrow is cancelled
'The trip tomorrow is cancelled.' [background]
b. Pål er sikker på at ...
Pål is sure at that ...
turen i morgen er avlyst.
trip.DEF tomorrow is cancelled
'Pål is sure that the trip tomorrow is cancelled.' [trigger & response]

The first main clause adverb condition is **main clause adverbs** and 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* 'plainly'. 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.
Pål said that he normally hates meatball.PL
'Pål said that he normally hates meatballs.' [background]
b. Pål: [trigger]

Jeg {hater} vanligvis {hater} kjøttkaker
I hate normally hate meatball.PL
'I normally hate meatballs.' [response]

The second main clause condition is **main clause *wh*-questions.** This condition included both **subject-** and **non-subject *wh*-questions** ((22) and (23) resp.), 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 team.PL partook in tournament.DEF
'Eirik asked how many teams were in the tournament.' [background]
b. Eirik: [trigger]

Hvor mange lag {som} deltok i turneringen?
how many team.PL COMP partook in tournament.DEF
'How many teams were in the tournament?' [response]

(23) a. Jonas spurte hva hun jobbet med.
Jonas asked what she worked with
'Jonas asked what she does for work.' [background]
b. Jonas: [trigger]

Hva {jobbet} hun {jobbet} med?
what worked she worked with
'What does she do for work?' [response]

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

I.3.3.2 Minor changes to the stimuli between experiments

The focus of the present study is syntactic variation. Nonetheless, we were additionally interested in testing morpho(phono)logical, lexical, and phonological variation in the Tromsø-dialect.[10] 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 (cf. Table 1). That is, 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.

I.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

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

effects of elicitation mode and register (cf., discussion in Section I.2.3). In Experiment 3, participants were paired up and took turns producing target items.[11] 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 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), the sentence in (b) is the expected response from the participant.

(24) a. Experimenter: Eg kjøre ofte bil til jobb.
I drive often car.INDEF to work.INDEF
'I often drive to work.' [background]

b. Participant: Eline sa at ho ofte kjøre bil til jobb.
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.[12] 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 hylte av glede etter
Say to Eline that I almost howled of joy after
kampen.
match.DEF
'Tell Eline that I almost howled of joy after the match.' [background]

b. Ho Sofie nesten hylte av glede etter kampen.
She Sofie almost howled of joy after match.DEF
'Sofie almost howled of joy after the match.' [response]

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

[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 that spoke Northern Norwegian, and a pair that 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.

Across experiments, participants' spoken responses were recorded using handheld digital audio recorders. A limited number of recordings were made 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 an online database. Due to technical issue with the audio recording, 5 of 48 sessions with group C and a further 19 responses from 1 participant had to be discarded from the results (Exp. 2).

I.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 orders 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).

I.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 I.5 compares the results of Experiments 2 and 3 which tested the same conditions with two different elicitation modes (written/spoken language), 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.

I.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.

It is striking how little variation there is in terms of the portion of Verb > Adverb orders between the three types of complements. Rather, embedded verb

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)
Total observations	**1439 (100)**	**542 (100)**	**443 (100)**

Table I.4: Word orders produced per clause type in EV2-condition, percentages in brackets.

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 orders 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 sæt sæ alltid fremst i klasserommet
Anne asked if Ole sit.PRS REFL always in.front 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 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 word order	***ikke* 'not' (%)**	***aldri* 'never' (%)**	***alltid* 'always' (%)**	***ofte* 'often' (%)**
Adverb >Verb (V3)	173 (86.9)	577 (93.7)	690 (86.8)	588 (73.9)
Verb >Adverb (V2)	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)
Total observations	**199 (100)**	**616 (100)**	**795 (100)**	**796 (100**

Table I.5: Word orders 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 orders produced in embedded clauses. That is, the proportion of embedded V2 orders 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 in North Germanic, as in English, can appear in a clause-final position 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).[13]

(27) a. Hun leser slike bøker ofte.
she reads such books often
b. Jeg tviler på at hun leser slike bøker ofte.
I doubt 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
b. *Jeg tviler på at hun leser slike bøker aldri/alltid/ikke.
I doubt on that she reads such 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 orders, namely 44.9%.

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

After removing all responses with potentially ambiguous items (i.e., without any additional VP-internal material, N = 267/796),[14] the embedded clauses with

[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.

[14] All EV2-test items with *ofte* are provided in Appendix I.B.

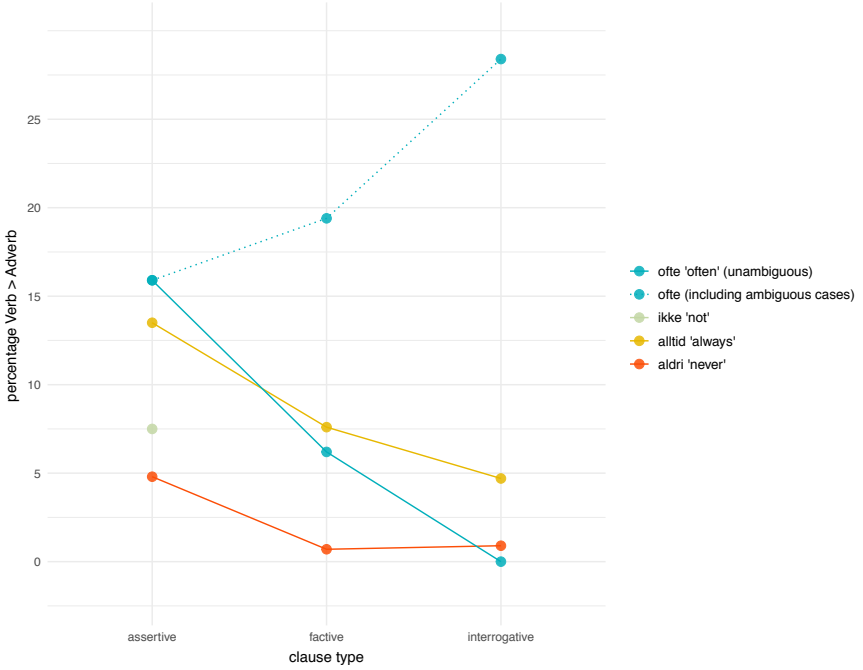

Figure I.2: Both adverb** and clause type** influence the proportion of Verb > Adverb orders produced. Dotted line includes potentially ambiguous cases of EV2 with the adverb *ofte*. Statistics performed by likelihood ratio tests comparing model with predictor to null-model, $p < .01$ (Adverb)/$p < .001$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

ofte still had the highest percentage of EV2-orders (collapsing over 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, $\chi^2(2) = 26.04, p < .001$).[15] As we also saw in Table 5, 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 I.6.

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 are less Verb > Adverb orders in factive complements (4.4%), as well as in interrogative complements (2.8%),

[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).

than in assertive complements (11.2%).[16]

I.4.2 Embedded *wh*-questions

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

Produced word order	**embedded subject *wh*-question (%)**	**embedded non-subject *wh*-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)
Total observations	**602 (100)**	**915 (100)**

Table I.6: Word orders produced in embedded *wh*-question-condition, split by ±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 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.' [NOR024]
b. Eline spør korsn unga kom på bursdagsfesten?
Eline asks 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

[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.

'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 orders.[17]

The results also include eight examples of the use of a cleft construction within an embedded *wh*-question (Table 6). 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 know.INF 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 know.INF how much snow it came yesterday
'Ole wanted to know how much it snowed yesterday.' [target]

I.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'

[17] Two participants consistently produce V2 word orders in this condition (i.e., NOR006, NOR020). Both 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.

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 from 85 speakers. For both types of adverbs, the Verb > Adverb (V2) order provided in the background sentences was often maintained and proportionally the most produced word order in both subconditions (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)
Total observations	**752 (100)**	**976 (100)**

Table I.7: Word orders 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 (see (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.' [part. NOR011]

These fronted adverbs are often followed by the element *så* 'so' (42.7% of the 'Adverb first'-orders). 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, these adverbs are often dropped altogether (65.9% of the items in the "other" word order category (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.' [part. 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' [part.KO04]

A final noteworthy observation is that V3-word order with many of the preverbal adverbs appears optional, 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).

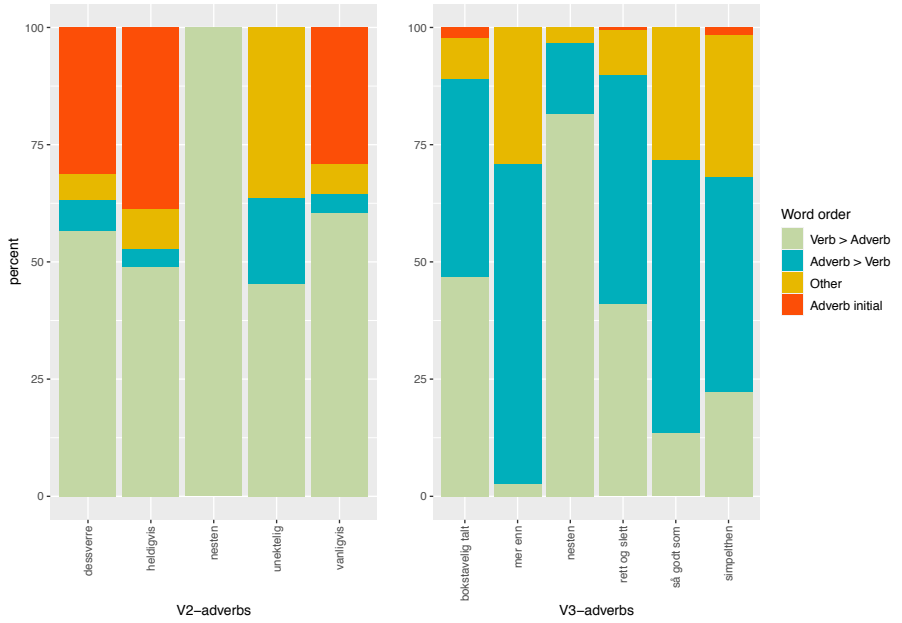

Figure I.3: Standard V2 word order is the most frequent word order produced across the V2-adverb-subcondition. V3-adverbs are produced with V2 as well as V3 order. (V2-adverbs left to right: *unfortunately, fortunately, almost, undeniably, usually*; V3-adverbs left to right: *literally, more than, almost, 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' seemingly differs 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 at between 122-220 observations of the other adverbs). The adverb *nesten* was included both as a sentence-modifying, V2-adverb (see (35))[18] and a verb-modifying V3-adverb (36).

(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.

[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*.

'I almost cried tears of joy when TIL scored.' [part. 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 (Figure 3). We can observe from Figure 3 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), 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 among most speakers here (some preferring V2 with these and some preferring V3 order), and for some speakers these adverbs appear to allow for optional word order (also speaker internally).[19]

I.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 got said in meeting.DEF
'What was said in the meeting?' [part. KO04]

(39) Korleis han gjor det?
how he did that
'How did he do that?' [part. NOR043]

The results for this condition are presented in Table 8. Recall from the discussion earlier 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 between these dialects as well.

The results in Table 8 show some noteworthy patterns. Firstly, non-V2 word order in *wh*-questions is produced almost exclusively with short wh's, regardless

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

Produced word order	**main non-subject *wh*-question (%)**		**main subject *wh*-question (%)**	
	short	***long***	***short***	***long***
V3	406 (67.2)	400 (90.9)	184 (41.8)	279 (63.3)
V2	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)
Total observations	**604 (100)**	**440 (100)**	**440 (100)**	**441 (100)**

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

of ±subjecthood status of the *wh*-element. This pattern is not unexpected as it is the main pattern in Northern Norway 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 on the other hand (N = 63), produce 15.1% of their main clause *wh*-questions with non-V2 order. In fact, using mixed effects logistic regression, I find an effect of Northern vs. non-Northern speakers ($\chi^2(1) = 19.22$, $p < .001$).[20]

Secondly, Table 8 shows that clefts are more often produced in subject than in non-subject *wh*-questions (see (40) and (41)). 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 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?' [part. 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-orders produced. 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*

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

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). 26.40% of the produced *wh*-questions with a pronominal subject had non-V2 order (N = 85/322). This number notably decreases to 10.64% non-V2 orders (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.

I.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 variation. 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, Westendorp & Strand (2020). Lundquist et al. focus not only on the syntactic variables, but also on 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 orders 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. I will now discuss the results from this latter group and compare them to the findings by Lundquist et al. (2020).

I.5.1 Syntactic reflexes of elicitation mode

In Section I.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

		Group C (High school)		Group D (UiT students)	
	mode	***written***	***spoken***	***written***	***spoken***
V3		49%	47.9%	40.5%	29.7%
V2		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%
Total observations		**96**	**48**	**126**	**64**

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

register. I will test these hypotheses in this section, starting with *wh*-questions.

Remember 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 I.4) non-V2 word order is hence almost completely absent in questions with long *wh*-elements. I will discuss subject *wh*-questions first, before moving on to non-subject *wh*-questions. 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 across the two elicitation modes (i.e., the two experiments 2 and 3) are the same for both groups of participants.

The results in Table 9 show that the proportion of non-V2 orders is roughly the same between the experiments/elicitation modes for either group (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 orders. I do not have an explanation for this change occurring specifically within this participant group, but priming may play a role here.

In the non-subject *wh*-question subcondition, the mean proportion of V3-orders over 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. Note that the individual differences are very large as speakers differ greatly in their word order choices but an overall trend to 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 Figure 4a) were the same in both elicitation modes. Contrarily to group C, group D produced non-V2 orders 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 results of the changes made in the material, not elicitation mode.

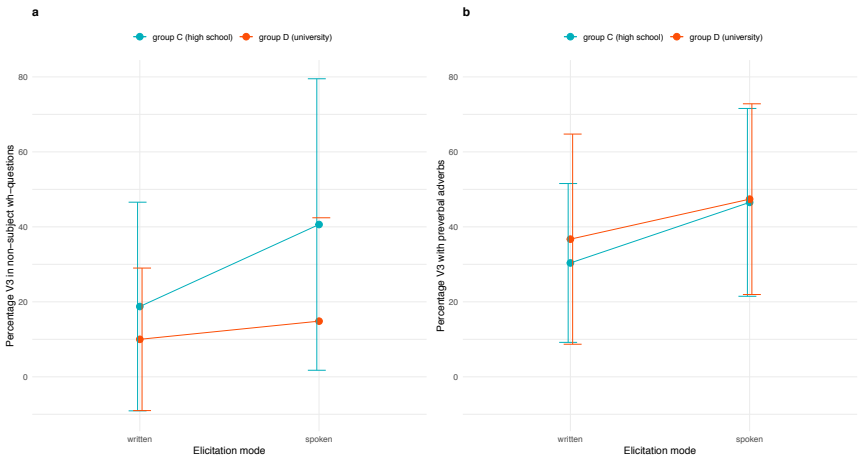

Figure I.4: **a.** The proportion of V3-orders in non-subject *wh*-questions sharply increased in the high school cohort (group C), but not in the university cohort (D) in the spoken elicitation mode. **b.** The proportion of V3-orders produced in the preverbal adverb-subcondition increased in the spoken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

Lundquist et al. also found an effect of elicitation mode on the use of non-V2 word orders in the preverbal/V3-adverb subcondition (Figure 4b). That is, they observe a significant increase in non-V2 orders 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-orders 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.

Finally, I hypothesised based on existing corpus research 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 orders 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% (SD = 18.32) 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% (SD = 14.51) 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 (SD = 18.73) 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-orders in the written experiment. But because of the large standard deviation of these measures, due to large individual differences, I am hesitant to draw conclusions about the effect of elicitation mode on the production of embedded V2.

I.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 participant's word order choices. In the compararison 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 therefore 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).

I.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[21] pattern. I will first discuss the variable verb placement in embedded clauses, before turning to word order variation in main clauses.

[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 V2 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).

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 orders 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-orders in the data. I follow Julien's assertion analysis (2015, 2020) and interpret this clause type difference as the result of the speech act potential of the clause. That is, embedded V2 is affected by the assertiveness 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 (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 orders 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 (29), Section I.4.1).

However, the data show a few issues that require further exploration. Firstly, when compared to the proportion of Verb > Adverb orders 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 number of Verb > Adverb orders, 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 orders 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 orders in 40.7% of the assertive conditions (Westendorp 2020). It is likely that Norwegian speakers require a specific, different pragmatic context to allow for embedded V2. 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). 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 compararison of the different North Germanic varieties may uncover distinctions between the EV2-systems of these varieties. One might consider if 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.

Secondly, we find that a number of participants produce embedded Verb >

Adverb orders in embedded interrogatives, usually considered an environment that blocks EV2. Here it is important to first 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 hypothesised non-V2 contexts 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 affected word order choice in the embedded V2 condition,[22] making it less likely that these Verb > Adverb orders are the result of V-to-I movement. Moreover, the production of embedded V>A orders 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 included 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 may 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 orders produced was much higher in experimental items with *ofte* 'often' and *alltid* 'always', than with *aldri* 'never' (and the negation *ikke*). In Section I.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. 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 between Verb > Adverb orders with *often* and *always* vs. *never* and *not*.

Our data show a pattern with regards to verb movement across different adverbs that is reminiscent of observations in Faroese, Northern Norwegian and Kronoby Swedish data in previous research (cf. Section I.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, contrarily, *always* and *often* group together. The analyses of the Faroese (Bentzen et al. 2009), Northern Norwegian (Bentzen 2005, 2007), and Kronoby

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

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 orders are 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/IP-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 IP-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 orders being produced with *alltid* and *ofte*. Both of these accounts of verb placement variation with different adverbs assume that at least some Verb > Adverb orders 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. And 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) $[_{\text{CP}}$ ... IP sub I^0 $[_{\text{vP}}$ t_{sub} V_{fin} $[_{\text{VP}}$ adv $[_{\text{vP}}$ ... t_V ...

This is the analysis that Koeneman & Zeijlstra (2014) pose for Northern Norwegian and Kronoby Swedish as an alternative to optional V-to-I movement.[23]

Finally, another potential explanation is the adverbs 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

[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.

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 of the above explanations, if any, 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 orders were produced almost exclusively in *wh*-questions starting with short *wh*-elements. This has previously been described as the common pattern for 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 only optional, not obligatory with many of the preverbal adverbs; demonstrating that 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). One might be inclined to think that the likelihood of producing non-V2 word orders with V3- adverbs for Norwegian speakers is higher because they can also activate non-V2 structures in other domains (e.g., *wh*-questions). Lundquist et al. (2020: 276) however 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 orders with these adverbs is largely the result of the use of specific lexical items. 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 the latter structure. Norwegian speakers seem to have little problem keeping several non-V2 constructions in their grammar while maintaining the verb second generalisation. It does not seem to be the case that the non-V2 constructions (though they are structurally different) 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. Taking 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, can be interesting for further research. A more in-depth look at any prosodic reflexes of word order variation is already planned. Furthermore, because the data was collected using controlled sampling methods, it also allows us to address questions about processing and production difficulties linked to atypical word orders in the future.

I.7 Concluding remarks and open questions

In an asymmetric V2-language like Norwegian, the root property of the clause (±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 on the basis of controlled experimental work. Though ±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.

The question is then how we should account for the word order variability within the V2 system. 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 orders 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 alongside any deviations from the asymmetric V2 pattern. 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 (±main/root), word order in Norwegian is more flexible in the interplay with pragmatic factors such as assertivity or speech act potential, and with several adverbs (especially the adverb *ofte* 'often'), resulting in a more gradient distribution of V2/non-V2 word orders across both main and embedded clauses. This is summarised in Table 10: 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.

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 manifesting uniformly as V-to-C movement not only in Norwegian (see e.g., Lohndal et al. 2020) but also in other V2 languages.

	+ MAIN	- MAIN
+ ASSERTIVE	V2 order (declaratives)	**variable word order** (assertive verb complements)
- ASSERTIVE	**variable word order** (*wh*-questions, imperatives)	non-V2 word order (embedded questions)

Table I.10: Effect of interplay between ±assertiveness and ±main clause on word order possibilities in Norwegian

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Appendix I.A Build-up of the three experiments

Remember that 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) is given in Table 11.

Experiments 2 (Table 12) and 3 (Table 13) 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.

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* 'plainly/simply'.

Part	Embedded V2	Embedded *wh*-questions	True fillers
1.	6 assertive context 6 factive context 6 ind. question	6 subject *wh* 6 non-subj. *wh*	6 assertive without adverb
2.	6 assertive context 6 factive context 6 ind. question	6 subject *wh* 6 non-subj. *wh*	6 assertive without adverb

Table I.11: Build-up of Experiment 1 testing embedded clauses only.

Part	Embedded V2	Embedded *wh*-questions	V2 & V3 adverbs	Main *wh*-q's	Decl. fillers
1.	12 assertive 4 factive 4 ind. question	5 subject 7 non-subj.			8
2.			8 V2-adv 8 V3-adv	8 subject 8 non-subj.	8

Table I.12: Build-up of Experiment 2 testing word order in embedded clauses (part 1) and main clauses (part 2).

Part	Embedded V2	Embedded *wh*-questions	V2 & V3 adverbs	Main *wh*-q'	Decl. fillers
1.	14 assertive 6 interrogative	4 subject 6 non-subj.			8 decl. 2 Q
2.			6 V2 12 V3	10 subject 10 non-subj.	2 decl.

Table I.13: Build-up of Experiment 3 testing word order in embedded clauses (part 1) and main clauses (part 2).

Appendix I.B Overview items in EV2-condition with adverb *ofte*

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

Table I.14: Overview items in embedded V2 condition with *ofte*.

Paper II

Word order variation in Norwegian wh-questions

Maud Westendorp

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II

Abstract

Across Norwegian dialects, *wh*-questions show variation concerning word order possibilities, with many dialects allowing non-V2 word order. The acceptance of this order differs across dialects and depends on the complexity and function of the *wh*-element. This study examines data from 409 informants across 105 sites in the Nordic Syntax Database (NSD). Throughout the study, new methodologies are used in an attempt to overcome some of the limitations of the NSD-map building tool as well as present new insights from a more detailed assessment of the acceptability judgements. Analysis of the frequency of these acceptability judgements on four test items showed that four grammars could be distinguished: these allow either only V2 word order; non-V2 word order across all *wh*-questions; non-V2 in all but long non-subject *wh*-questions; or non-V2 only with short *wh*'s. An apparent-time study of the data supports a diachronic connection between some but not all of the varieties.

Keywords: dialectometry; Norwegian; Verb Second violations; *wh*-questions

II.1 Introduction

Many Norwegian dialects lack verb-second (V2) order in *wh*-interrogatives. An example of an interrogative with non-V2 word order from the Nordic Dialect Corpus (NDC) (Johannessen et al. 2009) is given in (1).

(1) Ka du mein me å karrakteriser språk-e? (stamsund-04gk)
what you mean with to characterise language-DEF
'What do you mean with characterizing language?'

The acceptance of this non-V2 word order is subject to considerable variation at the more detailed level and has received quite a bit of attention in Norwegian dialectology. The influence of the information status of the subject (Westergaard 2003), the choice

Table II.1: Four types of non-V2 *wh*-questions in the Nordic Syntax Database.

Question type	Question text	NSD
short subject wh	Hvem som selger fiskeutstyr her i bygda, da? *who comp sells fishing.gear here in town then* 'Who is selling fishing gear here in town?'	#17
long subject wh	Hvor mange elever] som går på denne skolen? *how many students* COMP *go to this school* 'How many students go to this school?'	#1228
short non-subject wh	Hva du heter? *what you called* 'What are you called?'	#988
long non-subject wh	Når tid du gjekk ut av ungdomsskolen a? *what time you went out of middle.school then* 'When did you leave middle school?'	#33

of verb and form of the subject (Westergaard & Vangsnes 2005) and the form of the *wh*-element (Åfarli 1986; Westergaard & Vangsnes 2005), but also the possibility of the insertion of the complementizer *som* 'that' under embedded subject extraction (Westergaard et al. 2012) have been claimed to influence word order possibilities and word order choice in *wh*-questions across dialects. The geographical distribution of non-V2 *wh*-questions across Norwegian dialects has been described thoroughly on the basis of data from the Nordic Dialect Corpus (Vangsnes & Westergaard 2014) as well with maps from the Nordic Syntax Database (e.g. Westergaard et al. 2017). Lie (1992), Vangsnes (2005), Westergaard (2009a), Westergaard et al. (2012, 2017) and others have all proposed accounts for the historical development of non-V2 word order. Lie (1992) puts forth that non-V2 developed from cleft sentences such as *Hå e de du si?* 'what is it you are saying?'. The non-V2 order arises when the expletive pronominal subject *de* 'it' in the matrix cleft sentence is deleted. This deletion subsequently leads to non-V2 order when the construction is phonologically reduced through haplology to *Hå du si?* lit. 'what you say?' (1992:72). Using data from the Nordic Syntax Database (Lindstad et al. 2009), Westergaard et al. (2017) recently argued for a different and detailed diachronic development of the spread of non-V2 *wh*-questions. They discuss five stages in the diachronic development from V2 to non-V2 starting in simplex subject questions and gradually spreading to non-subject questions and questions with more complex *wh*-elements. The complementizer *som* 'that' plays a central role in the account by Westergaard et al.; non-V2 is realised in subject questions when *som* is inserted in the second position instead of the verb. This analysis will be discussed in more detail in Section II.3.2.

Four items in the Nordic Syntax Database (Lindstad et al. 2009) exemplify the types of *wh*-interrogatives that allow non-V2 word order in Norwegian: simplex and complex *wh*-questions with either subject or non-subject *wh*-elements (Table II.1). The notions 'simplex' and 'complex' will be used interchangeably with 'short' and 'long' as there is often a direct correspondence between complexity and length for the inventory of *wh*-items. Dialectal differences plays a role here and some examples will be discussed in later sections. Many of the studies mentioned above have used these test items and the corresponding maps/results from the NSD.

A significant drawback of the Nordic Syntax Database, which forms the basis of

the Westergaard et al. (2017) proposal and many of the other studies mentioned above, is that individual speakers' results cannot be taken into account. That is, on the maps drawn up in the NSD, judgements from several speakers are converged to a single score per location dismissing individual variation. The internal hierarchical structure of the database, which includes speakers from different age groups and genders, can thus not be taken into consideration. The map-building feature of the database furthermore does not allow one to make maps for various combinations of judgements; only providing options to show either high, medium or low scores for each location but not a combination of several differing scores. This way, only the geographic distribution of single linguistic features can be studied. The variation within different sites, as well as the role of sociolinguistic factors that may influence word order possibilities, such as age and gender, are understudied. In this article I take into account the full range of data from 409 speakers from 105 locations across Norway in an attempt to overcome the aforementioned limitations of the map building feature in the database. This aggregate perspective encompasses as much of the variation as possible. The methods used and the results from the NSD are presented in Section II.2 below. Other data, e.g. from the Nordic Dialect Corpus (Johannessen et al. 2009), and theoretical issues are discussed in Section II.3.

II.2 Results

II.2.1 Method

The method used in this study is based on the assumption that ongoing language change causes synchronic variation between old and new forms (Kay 1975; Weinreich et al. 1986). Synchronic variation as a consequence of diachronic change is typically found between generations, where the language use of older generations represents an older stage of the language while younger generations show a newer stage (Labov 1994). The differences between the language of multiple generations can be utilised to study language change without requiring longitudinal data but instead making use of 'apparent time' (Labov 1965). Rather than making use of the map building tool in the NSD, all the Norwegian results for the four test items (Table II.1) were downloaded and converted to a code based on the combination of acceptability scores the speakers assigned the four non-V2 *wh*-questions. For this, all judgement scores were converted to dichotomous scores; low('1' and '2') scores were converted to '0' (not accepted by speaker) and medium and high scores ('3', '4', '5') to '1' (accepted).[1] Subsequently, if a speaker for example accepts only subject non-V2 interrogatives (items #17 and #1228) but not non-subject non-V2 interrogatives (#988 and 33), this speaker gets the code '1 1 0 0' (see Table II.1 for test items).This aggregate analysis of the variation encompasses as much of the variation between language varieties as possible rather than concentrating on single linguistic features. Dialectometrists such as Nerbonne (2011) have argued for such a perspective, claiming that linguistic variation is multifaceted and that individual features of most non-dialectometric work often do not coincide or are geographically exception ridden (2011:479). The R environment (R Development Core Team 2016) is used to perform statistical analyses; maps are drawn using the same environment as well as Gabmap, a web-based application that facilitates explorations

[1] The distribution of the scores across the four items was bi-modal to such an extent that it was judged to be reasonably representative to read scores '1' and '2' as 'not accepted' and scores '3' and up as 'accepted'.

in quantitative dialectology (i.e. dialectometry). Gabmap allows even researchers with little computational expertise to create various maps and graphs of dialect data intended to illustrate quantitative results insightfully (Nerbonne et al. 2011)

II.2.2 Synchronic variation in the Nordic Syntax Database

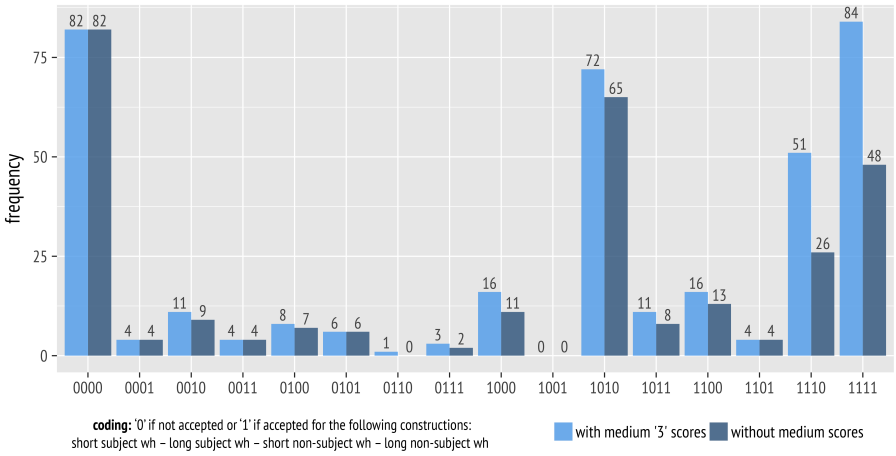

Figure II.1: Frequency of use of different combinations of judgements of four non-V2 questions.

Figure II.1 provides a graphical overview of the frequency distribution of the different judgement combinations across Norway. Data from 373 participants is included, for the remaining 36 speakers, the data in the NSD was incomplete. Apart from the combination '0000' where only V2 order is accepted, three combinations of judgements stand out as very frequent: '1010', '1110' and '1111'. A breakdown of these combinations is provided in Table II.2.

In an attempt to minimise noise in the distribution, combinations containing medium judgements (score '3') were removed before calculating the combination frequencies again (Figure II.1, dark blue bars). The resulting distribution is not significantly different from the original (chi-square analysis: $\chi^2(14) = 10.9876$, $p = .687$). Unexpectedly, the biggest differences between the two distributions are found not in the infrequent combinations (such as '1000' or '1100') but in the combinations that allow non-V2 in most or all *wh*-questions (i.e. '1110' and '1111'). The relative frequency between the two distributions (with v. without medium score) for both of these combinations was significant ('1110': $\chi^2(1) = 8.1169$, $p < .01$ and '1111': $\chi^2(1) = 9.8182$, $p < .01$).For the four most frequent variants, chi-square analysis showed that gender of the participants did not play a role in the score distribution ($\chi^2(4) = 1.8466$, $p = .764$).

Looking closer at the distribution of the scores for speakers of the two variants '1110' and '1111', we find that the majority of the medium scores for the '1110'-speakers are given to complex subject *wh*-questions (Figure II.2). Speakers of the latter variant give most medium scores to complex non-subject questions (Figure II.3). The acceptance

Table II.2: Breakdown and description of four most frequent combinations of judgements across test items.

Description	Code	short subj. *wh* #17	long subj. *wh* #1228	short non-subj. *wh* #998	long non-subj. *wh* #33
only V2	0000	0	0	0	0
non-V2 only with short wh	1010	1	0	1	0
non-V2 in all but long non-subj. wh	1110	1	1	1	0
non-V2 in all items	1111	1	1	1	1

Table II.3: Spearman's rank-order correlations between test items with complex, non-subject *wh*-elements.

			Correlations	
Item text	**Item #**	**Score >3**	33	43
Når tid du gjekk ut av ungdomsskolen a? *what time you went out of middle.school then* 'When did you leave middle school?'	33	31.1%	1	
Kvifor han var så sur eigentlig? *why was he so angry actually* 'Why was he so angry really?'	43	17.8%	.318	1
Korleis du skal feira 17. mai i år da? *how you shall celebrate May 17th in year then* 'How will you celebrate May 17th this year?'	1368	13.2%	.271	.405

of item #1228 (*Hvor mange elever som går på denne skolen?*) is precisely what distinguishes speakers of dialect '1110' from speakers of one of the other frequent combinations, namely '1010' that only allow non-V2 order with short *wh*'s. Similarly, item #33 (*Når tid du gjekk ut av ungdomskolen da?*) differentiates combination '1111' from '1110'. I take this as evidence for a link between these variants (mixed and fully non-V2; dialect with non-V2 only with short *wh* and mixed) as the speakers will come to fall into a different category when the acceptance of complex *wh*-questions with non-V2 order drops or rises. These high medium scores also fit with the documented low frequency of complex *wh*-questions (Vangsnes & Westergaard 2014); lack of input might make speakers insecure about the acceptability of the different word orders in complex interrogatives. Further evidence of the variability of non-V2 acceptance in complex *wh*-questions comes from two additional complex non-subject *wh*-questions (in addition to #33) that can be found in the database (see Table 3). These items were not included in the original typology because less than half of the participants gave judgements (N = 203 for #43; N = 153 for #1368) for these items.

To examine the relationship between the acceptability judgement scores on these

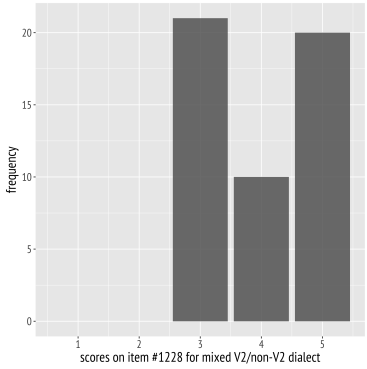

Figure II.2: Score distribution for item #1228 (long subject wh) in speakers with the 'mixed V2/non-V2' dialect.

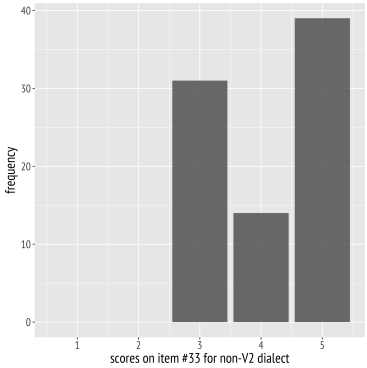

Figure II.3: Score distributions for item #33 (long non-subject wh) for 'non-V2' speakers.

three *wh*-questions within speakers, a Spearman's rank-order correlation was run to determine whether there was a monotonic relationship between the variables. The correlations between the scores given to the different items were very weak to moderate (see Table II.3). All correlations were significant, so unlikely to have occurred by chance. A possible explanation for the difference in acceptability of #33 and the other two sentences is that the *wh*-phrase *når tid* lit. 'when time' can easily be reduced to the short *wh*-word *når* 'when'. For 7 locations in the NSD, this is indeed the *wh*-element given in the written dialect form of the test sentence. Simplex *wh*-questions are more frequent overall and the overwhelming majority of non-V2 questions start with a short *wh*-word (92%; Vangsnes & Westergaard 2014). It is possible that this variability with respect to the *wh*-word has resulted in higher scores being assigned to item #33. The weak correlations between the items again confirms that there is a considerable variation on the acceptability of this question type, which is likely due to the low frequency of complex *wh*-questions.

II.2.3 Age effects in the Nordic Syntax Database

Focusing on only the four most frequent groups ('0000', '1110', '1010', '1111'), the young (15-30 years old) and the old (50+ years old) speakers of these variants are examined further. Figure II.4 shows the result of this analysis, here the codes are supplemented by a description of the different dialect types. Neither the difference between the two generations for each dialect type[2] nor the overall difference between all groups ($\chi^2(3) = 4.139$, p = 0.2468) was significant. However, the 'only V2' and the 'mixed V2/non-V2' variants are spoken by more old than young speakers, effectively declining; while the use of the 'non-V2' and 'short *wh* non-V2' variants seems to be expanding as these are used by more young than old speakers.

[2]Results of chi-square analysis between age groups (Figure II.4): only V2: $\chi^2(1) = 0.439$, p = .5076; mixed V2/non-V2: $\chi^2(1) = 0.9608$, p = .327; non-V2: $\chi^2(1) = 0.0476$, p = .8273; short *wh* non-V2: $\chi^2(1) = 2.7222$, p = .09896.

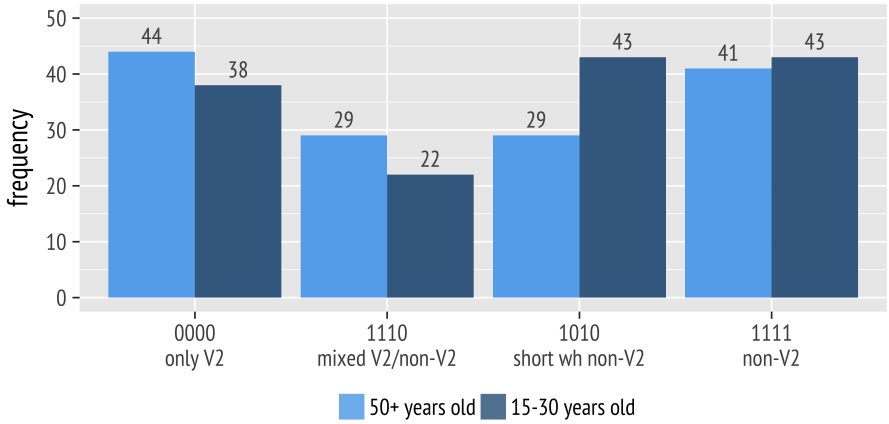

Figure II.4: Frequency of use of different dialect types split by age group.

In splitting the data by age group, location is lost as a factor in the distribution of the different stages. Therefore, the differences and similarities between young and old speakers were also studied per location. In 15 of the 105 locations available in the database, there is an apparent disparity in dialect preference between the generations with the older informants speaking one dialect and the younger generation another. Twelve of these locations included both speakers using mixed V2/non-V2 dialect and speakers of the variant with only short *wh*-words allowing non-V2 order. The cross tabulation in Figure II.5 shows the frequency of each combination of dialect stages between old and young speakers per location. Per location, each combination of a young and an old speaker was tallied. Only speakers without medium scores were included in the tally. The size of the circles is proportional to the size of the group of old and young speakers with the different combination of language varieties as indicated on the axes. The circles on the diagonal indicate the number of combinations of old and young speakers per location that agree on a particular dialect variant. We see that the mixed variant is not very stable (only two sets of an old and a young speaker agreeing) while the typologically most transparent stages are considerably more stable (only V2, non-V2). The lower right corner of the diagram is filled more than the top left, which fits with the results presented in Figure II.4 supporting the idea that young speakers use the dialects with non-V2 in all or only with short *wh*-words more than the older generation. The high frequency of the combination of young speakers allowing non-V2 only with short *wh*-words and older speakers with the mixed variety is remarkable. This overlap shows that these varieties often occur together in the same location and suggest a historical connection with the mixed variant being the archetype for the variant where non-V2 is constricted to be allowed only in simplex *wh*-interrogatives. No connection between any of the other combination of variants is as apparent.

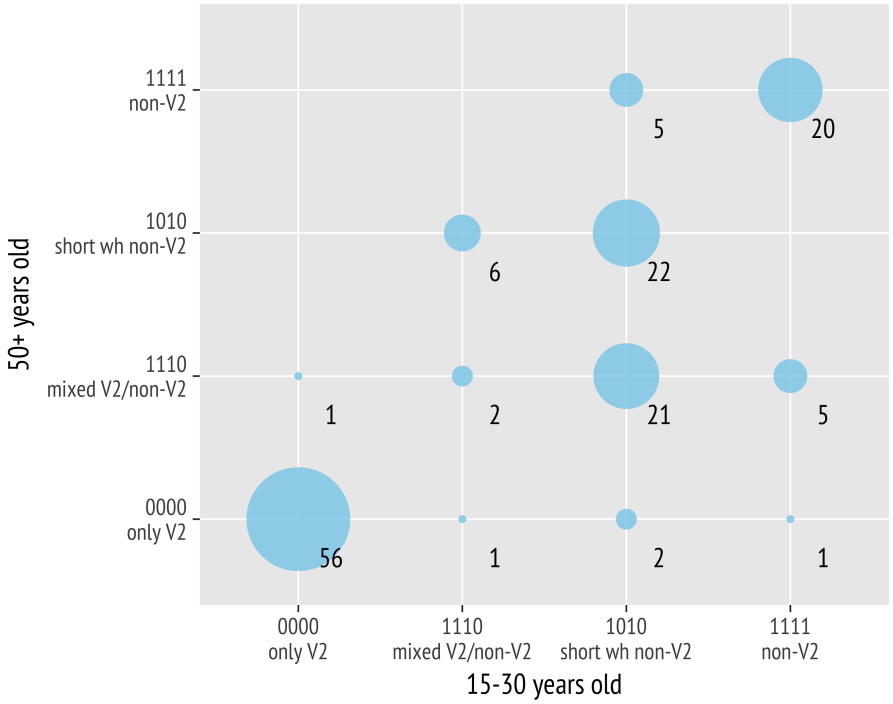

Figure II.5: Cross tabulation of different dialect type combinations between young and old age group per location (without medium scores).

II.2.4 Interim summary

Concluding, the data presented in this section provide substantial evidence for the existence of four main *wh*-grammars across the Norwegian dialects.[3] We find support for the following grammars: one allowing the standard verb-second word order only; a grammar that allows non-V2 with all types of *wh*-questions except long non-subject questions; a grammar that accepts non-V2 across all *wh*-questions and a grammar where the non-V2 order is restricted to questions starting with short *wh*-elements. The score distributions for the different test items, the comparison between old and younger speakers, as well as the cross-tabulation of different judgement combinations per location showed evidence for a connection between the mixed V2/non-V2 variant and the variant restricting non-V2 to short *wh*-words. The grammar allowing non-V2 across all items is not shown to be connected to any particular other stage using the apparent-time data.

[3]This division into four groups of dialect varieties concerning (non-)V2 in *wh*-questions may be a consequence of the way the NSD is designed as well as the selection of the four test items included in this study, i.e. the way the test sentences and test variables are grouped.

II.2.5 Aggregate variation

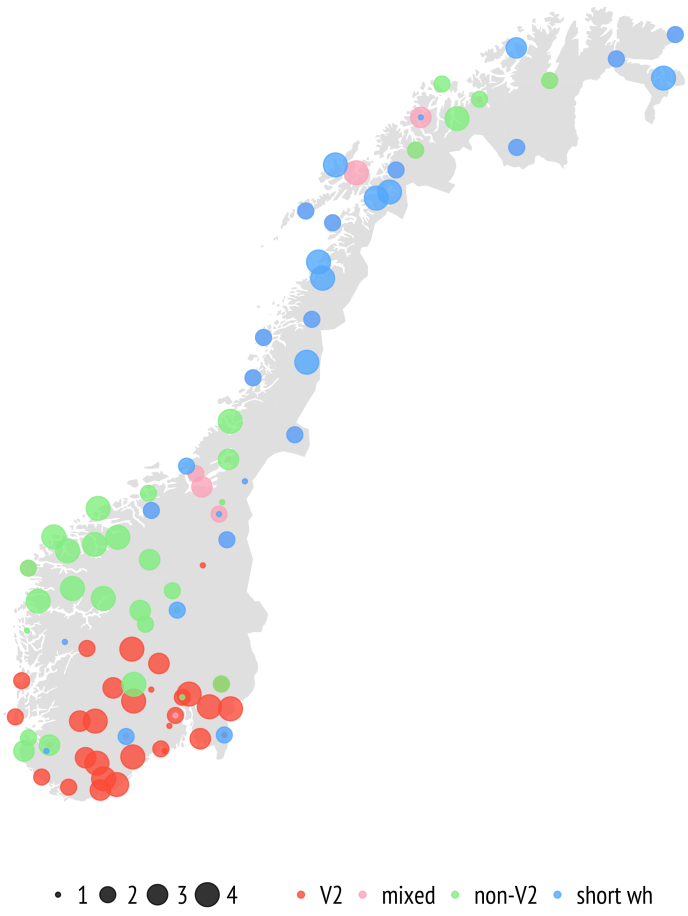

Figure II.6: Distribution of only V2 (red), mixed V2/non-V2 (pink), non-V2 (green) and only short *wh* non-V2 (blue) across Norway.

Figure II.6 plots the geographical distribution of the different non-V2 grammars across Norway. The size of the points is indicative of the number of speakers in each location using the variant. The mixed V2/non-V2 (pink dots) and the variant that allows non-V2 only with short *wh*-words (blue) are used mostly north of Trondheim, whereas the varieties preferring V2 or non-V2 across all types of *wh*-questions (resp. red and green) are most prominent in the southern part of Norway. Based on the data in the previous paragraph the non-V2 variant could not be linked to any of the other grammars diachronically. However, the geographical distribution of the non-V2 and the 'only V2' variants may inform us about a connection between these two dialects. I propose that the increased use of the 'non-V2' variety is caused not by a spread of

non-V2 word order to more types of *wh*-questions as hypothesised in earlier studies, but instead is the result of linguistic borrowing of the non-V2 construction by speakers originally having a strict V2 requirement across all interrogatives. As a result of the increased input of non-V2 *wh*-questions, speakers formerly disallowing non-V2 adopt non-V2 word order into their grammars. However, these speakers borrow this non-V2 word order and generalise the order across all types of *wh*-questions in the mirror image of their own dialect. This idea fits with the geographical distribution of the non-V2 dialect which is spoken in a region between the Northern counties where non-V2 is widespread but most often not allowed across all question types and the south of Norway where non-V2 is not present.

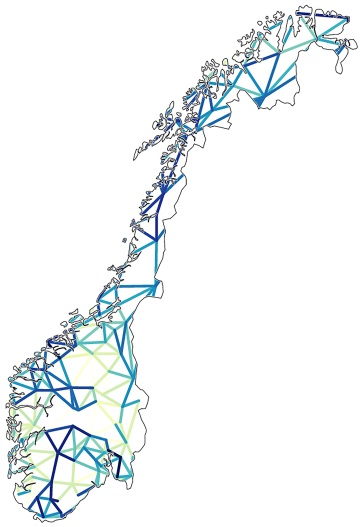

Figure II.7: Aggregate linguistic distances between neighbouring sites.

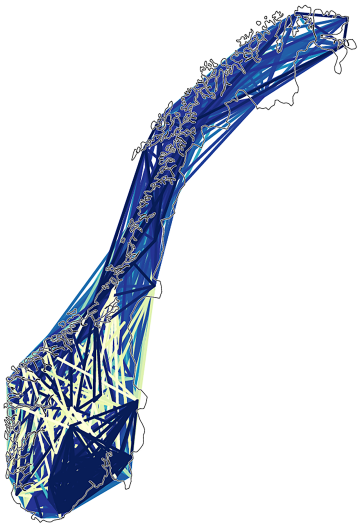

Figure II.8: Aggregate linguistic distances between all sites.

Finally, the 'network' or 'beam' maps in Figures II.7 and II.8 visualise the aggregate linguistic distances between the locations in the data set. These maps are based on the mean linguistic distances between pairs of sites in the data set. For every site, all the individual data points for the four test items were included. The darkness of the lines is directly proportional to the linguistic similarity between the sites. These figures confirm the pattern in the earlier figures, Norway can be roughly divided into three regions by the level to which non-V2 *wh*-questions are accepted. That is, two regions which are linguistically similar internally: Northern Norway (Trondheim and northwards) and a region in the southeast around Oslo. The third area, broaching West and Central Norway, is linguistically more diverse as indicated by the group of lighter beams in Figure II.8. From Figures II.5 and II.7 we can conclude that this convergence of lighter beams has two separate explanations. Figure II.5 showed that there was little agreement in the area in the south east Norway and none of the speakers here used any of the four main grammars. Furthermore, Figure II.7 shows that there is a split between the Oslo-region (only V2) and the central west (non-V2 in all *wh*-questions).

Table II.4: Overview of frequency of different non-V2 *wh*-question types in the Nordic Dialect Corpus.

Question type	Occurrences in NDC		Example from NDC
short subj. wh	57	17.2%	Åkkje såmm driv me di ra? *who* COMP *work with that then* 'Who is dealing with that?'
long subj. wh	2	0.6%	*Hvor mye kollektivtrafikk som er til Kvalsvika?* how much public transport COMP is to K. 'How much public transport is there to K.?'
short non-subj. wh	253	76.4%	Ka du har jorrt på skola i dag? *what you have done at school today* 'What did you do at school today?'
long non-subj. wh	19	5.7%	Korr de går me denn ær mottosjporrtklubben? *how it goes with that there motorsports.club* 'How is it going with the motorsports club?'

II.3 Discussion

II.3.1 Other data sources

The low frequency of complex *wh*-questions documented by Vangsnes & Westergaard (2014) has been put forth as a central part of the explanation that non-V2 word order originates in simplex *wh*-questions as well as in explaining speaker's uncertainty concerning the acceptability of complex non-V2 interrogatives. The frequency of the particular four types of questions in the Nordic Syntax Database specifically was not tested by Vangsnes & Westergaard (2014). In the Nordic Dialect Corpus (Johannessen et al. 2009) a total of 880 examples of non-V2 *wh*-questions match the four types of *wh*-questions of the database. After manual exclusion of non-main clause sequences, 331 relevant results are left (see Table II.4). Complex *wh*-questions are as expected very infrequent; accounting for only 6.3% of the total. The most frequent type of *wh*-question with non-V2 order found in the corpus corresponds to #988 in the NSD. The relative infrequency of subject *wh*-questions is disjoint with the hypothesis by Westergaard et al. (2017) that non-V2 starts in subject *wh*-questions.

There are two main theories of how the non-V2 word order developed: either from *wh*-questions in cleft constructions which are reduced as proposed by, amongst others, Lie (1992) and Westergaard et al. (2012, 2017); or from embedded questions which always have non-V2 word order in Norwegian (e.g. *Jeg lurer på hva han gjør.* 'I wonder (about) what he is doing.') (Iversen 1918; Knudsen 1949; Fiva 1990). As is known from research in language change, frequency is often a driving force in phonetic reduction (Jurafsky et al. 2001). Hence, one would expect this reduction to occur in a frequent construction if we are to take cleft reduction as the starting point for non-V2. The same argument can be applied to the hypothesis that non-verb second word order originates from embedded questions, presuming of course that short non-subject *wh*-questions are also the most frequent type of embedded question. Whether it is the main clause remaining unexpressed in such cases, or adoption of the embedded word order because it is more economical to not move the verb; frequency is likely to play a role here as

well. It is important to keep in mind however, as is known from language acquisition research, that often it is not the mere number of examples but rather the sense in which a given construction may provide a clue for the underlying grammar that is decisive in determining whether a (novel) construction is adopted (Diessel 2007). A first step to test the above speculations would be to verify the frequency of clefted and embedded *wh*-questions. Nevertheless, it is probable that frequency plays some role in the change from strict verb second to non-V2 word order. On the basis of the corpus data, I would therefore tentatively suggest that non-V2 order developed in simplex non-subject *wh*-questions (i.e. type #988 from the NSD).

II.3.2 Relation to Westergaard et al. (2012, 2017)

Westergaard, Vangsnes & Lohndal (2012, 2017) have previously studied the word order variation in Norwegian *wh*-questions based on the four items in the database also discussed in this article. They propose that the loss of the V2 requirement is related to changes in the properties of the complementizer *som* and distinguish the five stages in the development (2016:27-8):

(2) **stage 0**: general V2
stage 1: non-V2 in all subject questions with short and long *wh*-elements
stage 2: non-V2 spreads to non-subject questions with short *wh*-elements
stage 3a: non-V2 spreads to non-subject questions with complex *wh*-elements
stage 3b: non-V2 is restricted to short *wh*-elements

The findings from the Nordic Syntax Database (Lindstad et al. 2009) presented here provide more evidence for some, but not all of the stages above. That is, the four variants that were shown to be most frequent, correspond to four of the five stages in Westergaard et al.'s (2017) proposal: i.e., stages 0, 2, 3a and 3b (see Figure II.1). Stage 1 as described in (2) corresponds to the score combination '1 1 0 0' which was shown to be significantly less frequent across Norway.[4] Secondly, from the comparison between generations (Figure II.4), we observe that the variants that are declining correspond to what Westergaard et al. (2017) propose to be older variants, while the other variants correspond to newer stages in their account of the development of non-V2 word order. Apart from a link between stages 2 and 3b ('1110' and '1010'), no evidence for the non-V2 word order spreading through the five stages 0 to 3b was found in the present study.

II.3.3 Discussion of findings

The present study showed that there are four groups of dialects distinguishable on the basis of acceptability judgements on four non-V2 *wh*-questions in the Nordic Syntax Database (Lindstad et al. 2009). These four grammars have either only V2 word order; non-V2 word order across all *wh*-questions; non-V2 in all but long non-subject *wh*-questions; or non-V2 only with short *wh*'s.The data show a few issues that require further exploration. In the first place, a striking finding is that not all the grammars could be linked to one another. The apparent-time study, as well as the cluster and

[4] Of course, a possible explanation of the unexpectedly low frequency of the assumed stage 1 in the scenario by Westergaard et al. (2017) is that this stage supposedly is the starting point of the whole development. It could well be the case that exactly because it was the starting point, it nowadays is less frequent.

linguistic distance maps, showed a clear connection between non-V2 with all but long non-subject *wh*'s ('1110') and the grammar that allows non-V2 only with short *wh*'s. However, no link between the former and the grammar with non-V2 in all *wh*-questions was found in the apparent-time study even though this was earlier hypothesised by Westergaard et al. (2017). I, therefore, proposed an alternative explanation that the grammar allowing non-V2 across all types of *wh*-questions is the result of the adoption of non-V2 by strict V2-speakers borrowing the construction in the mirror of there own underlying dialect type. Hence, the mixed grammar seems to be the archetype for grammar with non-V2 with short *wh*'s that is an adaption of this grammar but with a phonological restriction. The grammar with non-V2 in all *wh*-questions is the result of a syntactic generalisation. Finally, though this analysis of the database material has provided new evidence on the types of *wh*-grammars in Norwegian dialects, no conclusive explanation can be given as to why the non-V2 word order arose in the first place. Westergaard et al. (2017) argue that the word order change starts with changes in the lexicalisation possibilities of the complementiser *som* 'that', but that hypothesis was not borne out by the data presented in this article. Alternatively, I presented data from the Nordic Dialect Corpus arguing in favour of the hypothesis that non-V2 first appeared in short non-subject *wh*-questions. Still more research is needed to investigate what has caused the V2-requirement to change.

II.4 Conclusion

Throughout this study, new methodologies were used in an attempt to overcome some of the limitations of the map tool in the Nordic Syntax Database as well as present new insights from a detailed examination of the acceptability judgements gathered in the database. The present study has investigated several hypotheses concerning the diachronic development and synchronic variation of non-V2 word order in Norwegian *wh*-questions. These hypotheses were tested by examining acceptability judgement data available in the Nordic Syntax Database of 409 informants from 105 sites across Norway. Examination of the frequency of acceptability judgements across individual speakers showed that four groups of dialects could be distinguished by the non-V2 variation across the four test questions. These four grammars have either only V2 word order; non-V2 word order across all *wh*-questions; non-V2 in all but long non-subject *wh*-questions; or non-V2 only with short *wh*'s. Additionally, the geographical distribution of these four grammars was discussed. By using the apparent-time method, a historical connection between the latter two grammars was found.

Paper III

Code-switching alone cannot explain intraspeaker syntactic variability

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Abstract

We address the question whether speakers activate different grammars when they encounter linguistic input from different registers, here written standardised language and spoken dialect. This question feeds into the larger theoretical and empirical question if variable syntactic patterns should be modelled as switching between different registers/grammars, or as underspecified mappings from form to meaning within one grammar. We analyse 6000 observations from 26 high school students from Tromsø, comprising more than 20 phonological, morphological, lexical and syntactic variables obtained from two elicited production experiments: one using standardised written language and one using spoken dialect as the elicitation source. The results suggest that most participants directly activate morphophonological forms from the local dialect when encountering standardised orthographic forms, suggesting that they do not treat the written and spoken language as different grammars. Furthermore, the syntactic variation does not track the morphophonological variation, which suggests that code/register-switching alone cannot explain syntactic optionality.

Keywords: code-switching; elicited production experiment; microvariation; Northern Norwegian; registers vs. languages; syntactic optionality; syntactic variation

III.1 Introduction

Many, if not all, language users are bi- or multilectal: that is, their linguistic competence encompasses two or more closely related systems, which we may label dialects, sociolects, registers or simply 'lects'. Most language users can understand varieties closely related to

their native dialect and possibly adjust their speech to accommodate to these varieties as well. In addition, most speakers can handle a standardised written language, which may differ considerably from the spoken dialect with respect to lexicon, syntax, morphology and even phonology, to the extent that phonological representations are activated during reading (see e.g. Leinenger 2014 for arguments that quite detailed phonological representations are activated during reading, both at the segmental and suprasegmental level). Whether such a default state of multi-lectism is qualitatively different from more well-established situations of bi/multilingualism is still unknown. Some recent proposals within the generative field has stated that anyone who masters several registers or dialects with a different set of linguistic features should be seen as having access to multiple grammars, see especially Roeper's Universal Bilingualism (Roeper 1999), and the extensive discussion in Eide & Åfarli (2020). We wish to contribute to this discussion in the current article, by addressing the nature of intraspeaker variation. Every speaker's output contains, at least on the surface, variable patterns: alternative ways of saying the same thing (Labov 1972). The variability is often highly structured, i.e. conditioned by speech situation or subtle semantic features. However, the conditioning often appears to be probabilistic rather than deterministic in nature, which suggests that the mappings from meaning to form are partly underspecified. We thus appear to be dealing with partly probabilistic grammars. The scenario of default muliti-lectism sketched above does however open up for the possibility of treating different cases of syntactic variability as switching between two or more non-variable 'lects', similar to code-switching in more obvious multilingual contexts (see e.g. Kroch 1989, Roeper 1999). In this paper, we address the role of register/dialect mixing in accounting for SYNTACTIC variation within speakers: can apparent syntactic optionality be modelled as a higher level switching between fully deterministic grammars, or is optionality better modelled as underspecification within one grammar? This question,as we will see, is only meaningful as long as we either associate a grammar with a set of shared linguistic attributes or connect it to a specific sociolinguistic context. Once a grammar has been identified, either through linguistic properties or context, we can investigate if certain syntactic patterns co-vary with a set of lexical, morphological and phonological forms. If they do, we have good support for a theory of syntactic variation as code-switching, but if syntactic variation turns out to be completely independent of variation in lexical, morphological and phonological forms the syntactic variation is better modelled as within-grammar optionality.

The hypothesis that syntactic variability can be accounted for in terms of switching between two or more fully deterministic grammars has been around for more than 30 years, and it has been considered an alternative to probabilistic approaches to grammars (see especially discussions in Kroch 1989, Roeper 1999 and, Eide & Åfarli 2020). As far as we are aware, this hypothesis has not previously been tested in any large-scale systematic studies, partly due to both methodological and terminological challenges (see Section III.4 below).

In this study, we test the Universal Bilingualism hypothesis by systematically investigating syntactic intraspeaker variability in Norwegian, with a focus on the Tromsø dialect (Northern Norwegian). Norwegian has a large number of spoken dialects, and in addition two written standards (Nynorsk and Bokmål). No single language variety has been authorised as a standard for spoken Norwegian. Nonetheless, Sandøy (2011) describes *normalmål*, which he translates as 'language norm authorised by the state', as the spoken variety of Norwegian standardised with respect to vocabulary, syntax and morphology though not phonology (e.g. replacing dialect words, adapting to the standard's pronominal case forms and declensional classes). This standard is used in

formal settings, on television and on the theatre stage (see also Vikør 1993) and is also 'how we read texts aloud at school'(Sandøy 2011:119). Local spoken varieties are used in all other situations, from dialog with friends and family to education, politics and increasingly in media as well (Kerswill 1994). As a result, speakers in Norway will continuously encounter not only numerous spoken dialect varieties of Norwegian, but also a standard language, both in writing, and to some extent in speech. There is thus little doubt that most Norwegians are to some extent multilectal, which in the terms of Roeper (1999) means that they have knowledge of several grammars. In this paper, we focus specifically on the modern Tromsø dialect. In (1) we give an example of how the local dialect (1b) differs from the orthographic representation of the standard written Bokmål (1a).

(1) a. Marit drikker alltid kaffe sammen med venninnen sin etter
Marit drinks always coffee together with girlfriend her after
forelesningen.
the.lecture

b. **Ho** Marit **drikk bestandig** kaffe **ilamme** venninn**a si** etter
she Marit drinks always coffee together.with girlfriend her after
forelesninga.
the.lecture
'Marit always drinks coffee with her friend after the lecture.'

There are many differences between the two varieties: in the Tromsø dialect, a preproprial article is inserted before the subject (morphology), the present tense ending of the strong verb *drikke* is missing (morphophonology), the adverb *alltid* is changed to *bestandig* (lexicon), the complex preposition *sammen med* 'together with' is changed to *i lamme* (lit. 'in group with') (lexicon), and the form of the definite suffix in the two final nouns as well as the possessive has changed from the standardised common gender form (*-en*, *sin*) to its regular feminine form (*-a*, *si*). Differences between the local dialect and the standard language can be found also in the syntax. We illustrate this in example (2) below, where the dialect differs from the written standard in word order, here, verb placement, in addition to morphological (preproprial article) lexical (form or the *wh*-word) and phonological features (/til/ → /ti/) features:

(2) a. Hva kjøpte Pål til moren sin?
what bought Pål to mother his

b. **Ka han Pål** kjøpte **ti** mor**a si**?
what he Pål bought to mother his
'What did Paul buy for his mother?'

In (2a), the finite verb appears in its typical second position, while in the Tromsø dialect, it appears in the third position. Importantly, the Tromsø dialect also seems to allow the verb to surface in the second position, as in (2a).

The syntactic phenomenon we investigate in this study is variable verb second (V2) in a number of different syntactic contexts, including questions as in (2) above. We investigate to what extent it is possible to account for the SYNTACTIC variation within speakers in terms of (dia)lect mixing. We explore this by conducting a twofold elicited production study in a local high school in Tromsø where we examine various variables at different levels of the grammar. We manipulate the elicitation method in the study: in one experiment we use standardised written language and in the other

we use spoken dialect as the elicitation source. This method will be described in detail in Section III.4, followed by the results in Section III.5. We will start with a more in-depth discussion of optionality, specifically tied to the Northern Norwegian situation, followed by a description of variable V2 in Norwegian. The implications of the results are discussed in the Section III.6.

III.2 The phenomenon of optionality

In examples (1)–(2) above we illustrated some differences between the Tromsø dialect and the Norwegian written standard Bokmål. As was already noted above, the differences between the two systems however do not appear to be fully categorical. Often, both the local and the standard forms are available in the local dialect. In other words, the local form is only licensed in the local dialect, but the standard form is available in both the local and the standard dialect. This is the case for the V3 order in questions as illustrated in Table 1 (see also example (2) above).

Table III.1: Availability of standard and local forms in *wh*-questions.

Phenomenon	Written standard/Spoken 'Eastern Norwegian'	Northern Norwegian/ Tromsø
V2 in questions, ex. (2a)	OK!	OK!
V3 in questions, ex. (2b)	*	OK!

There is thus an asymmetric optionality here with respect to dialect – one dialect being more permissive and allowing both forms as options, with the other dialect categorically licensing only one of the options.

Another type of asymmetry with respect to variability is related to meaning. As will be discussed in Section III.3, embedded V2 is licensed only in the context of a certain pragmatic force, which we will call assertive force here. However, embedded non-V2 is equally available in this context, as illustrated in Table 2. Thus, optionality of word order choice is present in one of the pragmatic contexts (in this case, an assertive context), but only one variant is licensed in the other context (non-assertive contexts).

Table III.2: Availability of standard and local forms in embedded clauses.

Phenomenon	Non-assertive force	Assertive force
Embedded V *in situ*	OK!	OK!
Embedded V2	*	OK!

This article is about the right-hand column in both these tables, where both forms are in principle available. What is the nature of the syntactic optionality in these cases? Is all variation meaningful, either as expressing linguistic contrast or stylistic/register contrast, or do individual grammars contain non-deterministic mappings from message to form?

Within the generative framework, some researchers have gone as far as completely rejecting the possibility of optionality within a grammar: a given message has one and only one form in a given grammar. In cases where we find OPTIONALITY, i.e. more than one form corresponding to the same message, we have either missed subtle semantic or

pragmatic factors in our analysis (i.e. the two forms map onto two different meanings), or the two forms belong to different grammars or registers, schematised in Figure 1.

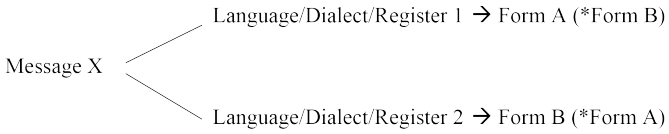


Figure III.1: Strict mapping message to form via different grammars.

The most radical proposal in this vein of research is Roeper's (1999) Universal Bilingualism, where optionality is ruled out in the very definition of grammar. Optionality is rather modelled as a higher order choice of a grammar, see also Kroch (1989) and Yang (2000). There are also developmental approaches that question optionality in grammars. One of the most influential attempts is Clark's (1987) PRINCIPLE OF CONTRAST, which states that the language learner always infers contrast in meaning from contrast in form. Clark's idea builds mainly on the scarcity of true lexical synonymy: different forms tend to be associated with different meanings. Clark argues that the principle of contrast has to be present during language acquisition in order to get the acquisition going: the language learner simply does not have the time or resources to evaluate whether every new item she encounters means the same as a previously learned item, but will rather assume that it has a different meaning. This reasoning can in principle be carried over from lexical items to syntactic constructions, including word order choices (see Clark 1987) so that a given choice of word order tends to indicate a certain meaning. However, it may be too much to expect from the language learner that she should associate certain low frequent word order patterns with either a certain meaning or a certain register.

Within other frameworks, the optionality has been incorporated as a central component of the grammar. Most obviously this can be seen in the contemporary exploration of probabilistic syntax (Bresnan 2007). In phonetics and phonology, probabilistic processes have been integrated for a long time, from Labov's (1972) formalisation of VARIABLE RULES to more recent attempts to build in stochastic processes in Optimality Theory (OT) grammars, for example Partially Ordered OT (Anttila 1997), Stochastic OT (Boersma 1997), and Harmonic OT (McCarthy 2000). Although probabilistic and strict approaches to syntax may appear as radically opposing at first glance, the differences start to look more rhetorical and less substantial as the definition of the notions 'grammars' and 'language' are narrowed. If two grammars differ only in one property, i.e. in the mapping from one meaning feature to one form, and if those two grammars are not necessarily associated with a specific set of phonetic forms, a lexicon or a specific speaker group or social context, then observed variation may either be described as a higher order probabilistic choice of 'grammar', or as a within-grammar probabilistic choice of a specific realisation of a variable. The contrast between 'multiple grammars' and 'probabilistic grammar' is thus only meaningful under the assumption that a grammar caries a set of defining linguistic attributes (lexical, phonological and syntactic properties), or is associated with a specific sociolinguistic context.

The register/grammar shift account of variation relies on the fact that the speaker has acquired several clearly separated grammars, each with strict message-to-form mappings. In the more classical standard cases of bi/multilingualism, code-mixing

will be easily detected, as the two codes are associated with different lexicons and grammars. However, if the two varieties share a large part of the lexicon and grammar, code-mixing will be hard or impossible to detect. In this scenario, code-mixing could in principle only be detected if variation is banned from the grammar on principled grounds (as in Roeper 1999, but see e.g. Haider 1999 for criticism). Equally likely in this scenario, is that the learner assumes a non-deterministic mapping from message to form, as illustrated in Figure 2.

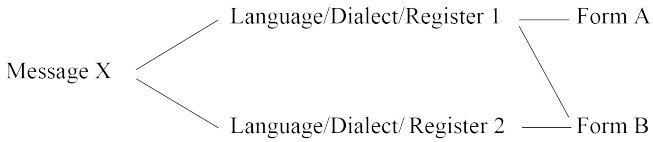


Figure III.2: Variation as a result of partially underspecified grammars.

We have little reason to doubt that some intraspeaker variation can be modelled as switching between grammars. A long tradition of studies of code-switching has shown that a switch from one language to another can take place within one sentence (see e.g. Poplack 1980), and possibly even within a word (Riksem et al. 2019) in bi- or multi-lingual speakers, and that these switches may target only one level of the grammar, e.g. syntax but not phonology. As long as we conceive of multi-lectal competence as identical to multi-lingual competence, code-switching should be equally likely in both situations. We neither have any reason to doubt that variation could be deterministically conditioned by the meaning/message that is to be expressed. The question is whether some linguistic alternations are completely void of meaning in a certain context, i.e. whether some choices of variants lack both linguistic and sociolinguistic meaning. For clarity, we list three sources underlying intra-speaker variation below.

(i) Register/dialect. The choice of a variant is associated with a certain dialect or register (Northern Norwegian/Standard/Colloquial/Formal). This extends to more standard situations of bilingualism: A Norwegian-English bilingual speaks English in an English-speaking context and Norwegian in a Norwegian-speaking context. Code-switching may be utilised for a stylistic effect or may appear as an effect of exhausted processing resources (see iii).

(ii) Meaning/structure. The variant is chosen to express a particular relevant meaning, e.g. assertion, quantificational scope, thematic structure.

(iii) Language processing/chance. The governing grammatical rule is genuinely underspecified, and a myriad of processing factors influence the final choice of form for variable (frequencies, current activation of a form, construction frequency, etc.).

By looking at variation in verb placement in Norwegian, we examine whether this syntactic variation can be fully explained by factors (i) and (ii) above. We focus mainly on the first factor and try to control for the second factor by using similar meaning contexts in an experimental setting.

III.3 Variable V2 in Norwegian

Norwegian is an asymmetric V2 language, which means that the verb is in second position in main clauses (3a), but in a vP-internal position in embedded clauses (3b). Because Norwegian is SVO, many subject-initial clauses are not unambiguously V2. The asymmetric V2 properties are, however, visible in non-subject initial sentences or in the presence of sentence adverbs:

(3) a. Norge knuste **heldigvis** Danmark i finalen.
Norway crushed fortunately Denmark in the.final
'Norway fortunately crushed Denmark in the final.'
b. Pål sa at Norge **heldigvis** knuste Danmark i finalen.
Pål said that Norway fortunately crushed Denmark in the.final
'Pål said that Norway fortunately crushed Denmark in the final.'

There are, however, a number of cases where the main-embedded distinction disappears, and it is these cases we will focus on in our study. The three cases we focus on are the following: variable V2 word order in *wh*-questions; 'V3-adverbs'; and finally, optional V2 in assertive embedded clauses. We will discuss these three cases in this section.

In standard/Bokmål Norwegian, main clause *wh*-questions are typical V2 structures, while embedded *wh*-questions are typically verb-*in-situ* structures, as illustrated with a non-subject question in (4) (note the lack of subject-verb inversion in (4b)).

(4) a. Hva kjøpte Marit i butikken?
what bought Marit in the.shop
'What did Marit buy in the shop?'
b. Anne spurte hva Marit kjøpte i butikken.
Anne asked what Marit bought in the.shop
'Anne asked what Marit bought in the shop.'

However, in the Tromsø dialect, as well as in many other Northern and Western Norwegian dialects, main clause non-subject questions can also have the verb *in situ*, resulting in a non-V2 structure with the subject preceding the verb, as in (5):

(5) Ka ho Marit kjøpte i butikken?
what she Marit bought in the.shop
'What did Marit buy in the shop?'

A similar pattern is seen in subject questions: a main clause subject question can surface with what looks like an embedded word order. Here, we see the main-embedded asymmetry in the presence of the complementiser/relative marker *som*: compare the standard Norwegian main and embedded subject question (6) with the Tromsø subject question in (7).

(6) a. Hvem kom på festen i går?
who came at the.party yesterday
'Who came to the party yesterday?'
b. Anne spurte hvem som kom på festen i går.
Anne asked who that came at the.party yesterday
'Anne asked who came to the party yesterday.'

(7) Kem som kom på festen i går?
who that came at the.party yesterday
'Who came to the party yesterday?'

The standard V2 word order is also found in the Tromsø dialect. The non-V2 word order is in addition constrained by certain linguistic features, in different ways in different dialects: in the Tromsø dialect, only 'short' *wh*-words allow V3 and *som*-insertion. Longer *wh*-words and phrases such as *kordan* 'how' or *kosn bil* 'which car' do not occur with this word order. For discussion of the dialect variation, the use of *som* and word orders in *wh*-questions see e.g. Westergaard, Vangsnes & Lohndal (2017) and Westendorp (2018). Non-V2 is highly regionally and linguistically constrained, but it is not obvious if these two factors (corresponding to i and ii in Section III.2) can fully explain the distribution, or if there are traces of true optionality involved as well.

The second case of variable V2 is found in sentences with so-called preverbal or 'V3' – adverbs. These adverbs usually directly modify the lexical semantics of the verb or put focus on the verb. Though these sentences seem to have non-V2 word order, it has been argued that the adverb–verb order in these cases is not a result of the verb staying *in situ*, but is rather due to the adverb attaching high, or directly to the verb (seen in the fact that subject–verb inversion is still licit) (see e.g. Julien 2018, Lundquist 2018 for discussion of these adverbs in Norwegian). On the surface though, the main clauses and the embedded clauses look similar, as shown in (8).

(8) a. Norge bokstavelig talt gruset Danmark i finalen.
Norway literally.speaking crushed Denmark in the.final
b. Pål sa at Norge bokstavelig talt gruset Danmark i finalen.
Pål said that Norway literally.speaking crushed Denmark in the.final
'(Pål said that) Norway literally crushed Denmark in the final.'

This phenomenon is not restricted to any particular dialect. The non-V2 order in (8a) seems to have a more colloquial flavour, although this has not been studied, as far as we are aware. Crucially, the reading available in (8a) would be equally available with the standard V2 word order. Again, we have a word order that is only licensed in a linguistically constrained context (type of adverb, reading of adverb), but in this context, the particular word order is only optional.

The last case of variable V2 is word order in embedded clauses. Several types of embedded clauses allow for main clause word order with the finite verb preceding the sentence adverb, see (9a, b). In these contexts, topicalisation and subject–verb inversion is in general possible as well.

(9) a. Pål sa at Norge knuste heldigvis Norge i finalen.
Pål said that Norway crushed fortunately Denmark in the.final
b. Pål sa at heldigvis knuste Norge Danmark i finalen.
Pål said that fortunately crushed Norway Denmark in the.final
'Pål said that Norway fortunately crushed Norway Denmark in the final.'

The main clause word order tends to carry certain pragmatic or semantic entailments (although these are hard to pin down) related to assertive mood or factivity (see e.g. Julien 2007, Wiklund et al. 2009, Bentzen 2014b). As a result, the main clause word order is generally unavailable in non-assertive clauses, such as embedded questions (and also relative clauses), see (10a-c).

(10) a. Eline spurte om Marit aldri går i kirken på søndager.
Eline asked if Marit never goes in the.church on Sundays
'Eline asked if Marit never goes to church on Sundays.'
b. *Eline spurte om Marit går aldri i kirken på søndager.
c. *Eline spurte om aldri går Marit i kirken på søndager.

An exception is found with certain sentence adverbs like *ofte* 'often' and *alltid* 'always', which can either appear in a typical sentence adverb position (inside TP/IP as in (11a)) or inside the verb phrase and as a result allow for embedded V2 (11b) (for discussion see Bentzen 2007).[1]

(11) a. Anne spurte om det ofte/alltid [$_{vP}$ snør i Tromsø].
Anne asked if it often/always snows in Tromsø
b. Anne spurte om det [$_{vP}$ snør ofte/alltid i Tromsø].
Anne asked if it snows often/always in Tromsø
'Anne asked if it snows often/always in Tromsø.'

Several studies have shown that embedded V2 is far more common in speech than in writing in all the Scandinavian languages (Heycock et al. 2012, Jensen & Christensen 2013, Djärv, Heycock & Rohde 2017, Ringstad 2019). There are a few possible explanations for this variation. First of all, normative pressures may be reducing the number of embedded V2 in written language and more formal contexts more generally. If this is the case, we may hypothesise a more categorical rule in the spoken register, yielding embedded V2 in assertive contexts and verb *in situ* in non-assertive contexts. In the written register on the other hand, this rule would be (partly) overridden by the normative pressure. Another possible explanation is that spoken dialog contains a slightly different linguistic content where other pragmatic factors are at play. Spoken language for example contains a significantly higher amount of first-person singular subjects, as well as more embedding with a speaker-oriented flavour (e.g. *I think*, *I know*, *I said* ...). It is not implausible that these contexts favour embedded V2 to a higher degree. If this is the case, embedded V2 is only indirectly conditioned by register.

To investigate if these variable syntactic patterns can be modelled as register or dialect switching, or if the variability is inherent within one lect/grammar, we set up an experimental study in a local Tromsø high school. We will now discuss the methodology of the study.

[1] There are certain syntactic environments where *ofte* 'often' is more likely to occur as a low adverb. We can see this in the following example, where the adverb *ofte* can occur after an infinitive, while *aldri* 'never' cannot occur in this position:

(i) Det bruker {ofte} å snø {ofte} i Tromsø.
it use often INF snow often in Tromsø
'It usually snows quite often in Tromsø.'

(ii) Det bruker aldri å snø (*aldri) i Spania.
it use never INF snow never in Spain
'It usually never snows in Spain.'

III.4 Aim and methodology of the study

III.4.1 Research questions and hypotheses

Code-switching or code-mixing is a natural part of the communication of most multilingual groups. In most cases, code-switching is easy to detect, due to the fact that the two languages in the mix can be identified based on their lexical and phonetic properties, and possibly their syntactic properties. This is not necessarily the case when two lects are very close to each other, as in the case of mixing of two (mutually intelligible) dialects. For the three syntactic variables discussed in the previous section, we do not know if any of the dialects are associated with one specific values of the syntactic variable, or if they contain more than one value. Furthermore, it is unclear if the local dialect speakers we investigate associate particular syntactic traits with any of the registers they master. One especially intriguing issue is the 'register' that is associated with the standardised written language. Written language is a major source of non-local dialect input for young people today – the amount of exposure to written language from e.g. school curriculum, books, newspapers and subtitles should not be underestimated. As we have seen above, the standard written language may differ from a spoken dialect both with respect to lexicon and morphology, and even syntax. Still, we have a very poor understanding of how the orthographic representations map to an internal grammar and lexicon. Research has shown that quite detailed phonological representations are activated during reading, both on segmental and suprasegmental levels (see e.g. Fodor 2002, Leinenger 2014). One intriguing issue is whether Norwegian dialect speakers activate standardised written forms when they read the standard language, or if they directly activate forms from their own spoken dialect.

To shed light on these issues, we will elicit lexical, phonological, morphological and syntactical variables in two experiments with equivalent stimuli but diverging elicitation methods. In the first experiment, we use standardised written language as our elicitation source in a read aloud + (modified) repetition paradigm (we call this the 'written test'). In the second ('spoken') experiment, we set up a 'gamified' dialogue paradigm with spoken dialect as the elicitation source. In both cases, we elicit spoken language. This gives us three measures for each of the lexical, morphological and phonological variables: (i) reading aloud standardised text, (ii) repeat and modify written input and (iii) gamified dialogue in dialect. For the syntactic variables, only measures in (ii) and (iii) will be relevant as speakers are merely repeating invariable written sentences in the first measure.

By directly comparing the amount of non-dialect lexical, morphological and phonetic forms from the three different measures, we will be able to provide an answer to whether a standard/non-dialect grammar is activated in the presence of written language (compare Labov's (1971) study on phonetic variables elicited across different spoken and read-out modes). Next, we can investigate co-variation between syntactic and phonological/morphological/lexical (PhonMorphLex) variables, and thereby directly test the variation-as-code-switching hypothesis. As was already mentioned, we face several methodological challenges when addressing this hypothesis, and it is not straightforward how to falsify or verify the hypothesis. We will lay out two different ways for assessing the hypothesis using our data. First, if we assume minimal independence between syntactic and PhonMorphLex variables: the syntax of a language is only activated in the presence of the PhonMorphLex of the language. In this case the code-switching hypothesis would be falsified if we find a set of utterances with variable syntax and only dialect forms of the PhonMorphLex variables. Now, as was discussed

in Section III.2, code-switching could in principle target also only one dimension of the grammar in a sentence, i.e. syntax could be switched without phonology being affected. A certain independence between linguistic dimensions is therefore expected, and we may instead just look for correlations between proportions of standard/dialect syntax patterns and standard/dialect PhonMorphLex forms. This can be done on two levels. First, we can compare contexts: are there more standard language syntax patterns in contexts where we find more PhonMorphLex standard forms? Secondly, we can look at correlations at the level of the individual: do speakers who often switch to standard PhonMorphLex forms also tend to switch to standard syntactic patterns? In short, this study is about whether syntactic variation is fully independent, fully dependent, or statistically dependent on PhonMorphLex variation. If it turns out that syntactic variation takes place fully independently of PhonMorphLex variation, we have to reject the variation-as-code-switching hypothesis.

III.4.2 Experimental set-up

We use a modified version of the elicitation experiment originally used in developing the Nordic Word order Database (NWD; see Lundquist et al. 2019). The aim of NWD was to test a wide range of syntactic variables within the North Germanic languages. In the current study, we included only the part of the NWD-test targeting verb placement and main clause/embedded clause asymmetries. In addition, we modified several of the stimuli sentences, to include as many lexical, morphological and phonological dialect variables as possible. The original experiment only elicited speech based on written stimuli. For the present study, we first adapted the original experiment and then modified the experiment to use spoken elicitation stimuli. Below we will refer to the two experiments as the WRITTEN test and the SPOKEN test, based on the elicitation methods (recall that the data collected is always spoken data). We will first introduce the written test and then discuss the modifications we made for the spoken test.

The experiments were set-up in OpenSesame (Mathôt, Schreij & Theeuwes 2012) and built on a simple sentence manipulation paradigm. A participant is presented with a sentence on a computer screen, which we will refer to as the background sentence, such as the following example (12):

(12) [**Background**]

(Anne:) Jeg kjører ikke bil til jobb.
(Anne:) I drive not car to work

'(Anne:) I do not drive to work.'

Here, the sentence is preceded by a name and a colon, suggesting that the utterance was made by Anne. After the participant reads the sentence out aloud, the start of a new sentence appears on the screen below the first sentence (see (13) in italics). The participant is prompted to read the cue and complete the sentence by using the material from the background sentence (in square brackets).

(13) [**Target**]

Anne sier at... [hun {kjører} ikke {kjører} bil til jobb].
Anne says that she drives not drives car to work

'Anne says that she doesn't drive to work.'

The background main clause obligatory has V2 (at least in this context), but verb movement is variable in the elicited embedded clause, and the participant can produce the sentence with the verb in second position or *in situ* (here, after the sentence adverbial). This set-up allows us to test (variable) embedded word order in assertive contexts, but also in embedded questions. The first half of the experiment uses this MAIN-to-embedded transformation. The second half uses the reversed version, that is, an EMBEDDED-TO-MAIN transformation, as exemplified in (14).

(14) a. Pål sa at Norge bokstavelig talt gruset Danmark i finalen.
Pål said that Norway literally.speaking crushed Denmark in the.final
'(Pål said that) Norway literally crushed Denmark in the final.'

b. (Pål:) [Norge {bokstavelig talt} gruset {bokstavelig talt} Danmark i finalen.
(Pål:) Norway literally.speaking crushed literally.speaking Denmark in the.final
'(Pål:) Norway literally crushed Denmark in the final.'

Here, the cue is only a name (14b). In the example above, the embedded background sentence (14a) has a potential V3 adverb, which may surface either before or after the verb in a main clause (14b). Using this second transformation we test placement of V3-adverbs as well as V2-deviations in main clause *wh*-questions. The items were presented in randomised order, but the part with the EMBEDDED-TO-MAIN transformation always preceded the MAIN-TO-EMBEDDED part to ensure that we did not prime participants with embedded adverb–verb sequences (as in (14a)). Each trial in the written experiment followed the following sequence:

(i) Trigger/background sentence on a screen, white font on black background (1000 ms);

(ii) Beep-sound (300 ms) after which the sentence turns red to prompt the participant to read the sentence out loud;

(iii) A button touch by the experimenter, at which the beginning of new sentence appeared in white font below the first sentence (which remains visible throughout);

(iv) Beep-sound (300 ms) after which the sentence turns red to prompt the participant to complete the sentence.

The strict timing of the experiment ensured that participants got into a steady rhythm which prevented them from consciously planning the word order. The experiments started with between two and four practice items, but otherwise contained minimal instructions. As the test is very intuitive, most participants got into a steady rhythm already after the first practice item. The participants were instructed to imagine a relaxed situation, for example at home with the family or with friends, where they would read aloud e.g. a newspaper headline or a sentence from a book. Some participants asked if they were supposed to 'speak dialect', to which we replied that it would be OK, if that felt most natural for them. In general, the purpose was to make to speakers read out or produce sentences in a maximally relaxed setting, where they were not aware of registers. The exact design of the experiment and the formulation of instructions were based on extensive piloting of the test and previous data collection for the Nordic Word order Database.

In the SPOKEN experiment, the background sentences were not written on a computer screen, but instead uttered by a native speaker of the local dialect. There were always two local dialect speakers present to administrate the experiment, as well as two participants. We chose this design to mimic as much as possible a casual dialog and create a more relaxed setting for the participants. After one of the experimenters produced the background sentence (15a)/(16a), participants were asked to pass on this sentence to the other experimenter present, as in (15b)/(16b), respectively. Like the written experiment, the spoken test used both the EMBEDDED-TO-MAIN (15) and the MAIN-TO-EMBEDDED transformation (16).

(15) a. [**Background**]

Æ sykle bestandig te skolen.
I bike always to the.school

'I always bike to school.'

b. [**Target**]

[Han Tor Håvard sa at han (sykler) alltid (sykler) til skolen].
he Tor Håvard said that he bikes always bikes to the.school

'Tor Håvard said that he always bikes to school.'

(16) a. [**Background**]

Spør ho Eline om ka ho jobbe med.
ask she Eline about what she work with

'Ask Eline what she is working on.'

b. [**Target**]

[Ka {du} jobbe {du} med]?
what you work you with

'What are you working on?'

The written and spoken tests targeted exactly the same syntactic variables. The test material was to a large extent the same as well, though some carrier phrases had to be changed slightly in the spoken experiment to fit with the dialogue setting. The spoken test set-up with two participants also meant that all the participants did not produce exactly the same items (see Supplementary Materials for grouping of participants in the spoken test). An important feature of the experiment design and the choice of material, is that the background sentence never has variable word order, e.g. in the MAIN-TO-EMBEDDED test, the adverb in the main clause background sentence is always a typical V2-adverb; and the *wh*-phrases are phrases that could not occur in non-V2 questions (at least not in the Tromsø dialect).

III.4.3 Material and linguistic variables

All stimuli in the written part were represented in what is called 'moderate' or 'conservative' Bokmål, characterised by e.g. lack of all type of feminine grammatical gender exponents, and *-et* rather than *-a* as the first conjugation past tense suffix (Vikør 2015). Out of all possible dialect variables, we focus in this study on 13 morphological, phonological variables (PhonMorphLex) in addition to the syntactic variables. The PhonMorphLex variables are given in Table 3.

Table III.3: An overview of PhonMorphLex variables.

Category	Variable	Value written background items (Bokmål)	Value spoken background items (Tromsø Norwegian)
Morphophonology			
First-person pronoun	PRON	*jeg*	*æ/eg*
Onset *wh*-words	WH	*hva, hvem, hvor*	*ka, kem, kor*
Present tense ending, strong verbs	PRES	*-(e)r*	–
Past tense ending, 1st conjugation	PAST	*-et*	*-a*
Feminine definite suffix	GEN	*-en*	*-a*
Lexicon			
Choice of *wh*-word	*hvilken*	*hvilke(n)*	*korsn/kordan*
	hvordan	*hvordan*	*korsn/kordan*
	hva slags	*hva slags*	*ka slags/korsn/ kordan*
	når		*katti* (*når*)
Morphology			
Preproprial article	PREP.ART	–	*ho/han* NP or –
Phonology			
ble/blei	BLE	*ble*	*blei*
Negation 'not'	NEG	*ikke*	*ikke* or *ikkje*
Preposition 'to'	TIL	*til*	*ti*

Due to limits of space we cannot in detail describe the dialectal and sociolectal distribution of the variables. What is relevant is the following: the forms in the third column are what was presented in the written test (Bokmål). The forms in the rightmost column are the expected Tromsø dialect forms, and these are the forms provided in the background sentence in the spoken test. Many of these forms are not unique to the Tromsø dialect but are present in many or most of the spoken dialects of Norway. For example, the two morphophonological variables past tense and feminine definite. suffix are realised as *-a* even in many Eastern Norwegian dialects. However, young speakers from Oslo are very likely to produce a spoken form directly corresponding to the orthographic Bokmål form, i.e. *-et* and *-en*, when presented with these forms. The interested reader is encouraged to listen to the sound files from an Eastern Norwegian participant doing the written test in the online Nordic Word order Database (select participant KO29), who produces all the variables as given in the third column.

The syntactic variables were already presented in Section III.3. We give an overview in Table 4. The values that have been claimed to be either more common or exclusive to a spoken (dialect) register are bold-faced in the table.

Table III.4: Overview syntactic variables.

Category	Default standard/ written	Northern Norwegian/ vernacular
main non-subj. *wh*-questions	V2	**V3**
emb. non-subj. *wh*-questions	V3	V3
main subj. *wh*-questions	V2	**V3/*som***
emb. subj. *wh*-questions	V3	V3
preverbal adverbs in main clause	V2	**V3**
regular adverbs in main clause	V3	V2
verb placement under bridge verbs	V2	**V2**
verb placement emb. questions	V3	V3

III.4.4 Participants and data collection

Twenty-six participants from the same local high school class (15–17 years old) participated in both the written and the spoken experiment. All participants grew up in Northern Norway. Twenty-four of the participants had Norwegian as their first language, though three of these participants grew up in a bilingual household; the final two participants were non-native (L2) speakers of Norwegian who lived in Northern Norway their entire lives and had learned Norwegian from a very young age. The class as a whole was paid 50 NOK (4.93 euro) per participant per session.

The participants were recorded at two separate occasions. The written experiment was conducted first, individually with each participant, at UiT The Arctic University of Norway in Tromsø. Three months later, when the participants had presumably forgotten the experimental items, the spoken experiment was conducted at the local high school.

III.4.5 Analysis and annotations

Across the two experiments, we collected three types of relevant utterances per item for the non-syntactic variables (see Section III.4.1). We will refer to these as the READ (read background sentence in written experiment), PRODUCE (target modified repetition in written experiment) and SPOKEN task (target gamified dialogue in spoken experiment). For the syntactic variables, we only have two values, as the background sentence does not contain any word order variation – the participants are simply expected to read the words in the order presented on the screen.

The audio files from the experiment sessions were automatically segmented on the basis of time stamps collected in the experimental software. Minimal annotations were added in ELAN (Wittenburg et al. 2006) indicating which word order was produced, e.g. AV (Adverb–Verb) or VA (Verb–Adverb). The non-syntactic variables, such as the form of the *wh*-words were coded manually across selected items. Although we often find more than two possible realisations of each variable, we try to give a binary classification of most variables in the description of the results, usually tagged as DIALECT and WRITTEN STANDARD. This is primarily done to facilitate the statistical analysis where we mainly use mixed effects logistic regressions (from the r-package *lme4*, Bates et al. 2015), with the number of dialect exponents as our dependent

variable. For correlations between variables, we apply regular linear models with the proportion of dialect realisations as dependent variables and predictors. As set out in Section III.4.1, we are interested in finding out if (i) the syntax is invariable in contexts were the PhonMorphLex forms are invariable, and if not, (ii) if the syntactic patterns co-vary with PhonMorphLex (a) between contexts and (b) speakers.

III.5 Results

We have analysed a total of 6051 observations, split over the two experiments and 26 participants and across all different types of variables. We will present the results from the set of non-syntactic variables in Section III.5.1. The result will directly show us to which extent non-dialect phonological, morphological and lexical forms are activated by dialect speakers when they are faced with standardised orthographic forms. From the results of the spoken test, we will be able to tell to which extent the different dialect features vary in the local dialect. In Section III.5.2 we present the results from the syntactic variables, which will be directly compared to the non-syntactic results, in order to determine the association between specific word order patterns and the set of morphological and phonological forms.

III.5.1 Non-syntactic dialect variables

We present the results from the non-syntactic variables in Sections III.5.1.1–III.5.1.4 below, following the classification in Table 3. We start with the morphophonological variables, where we expect to find most categorical results. With these results we establish the amount of dialect variation within the whole group, within and between speakers as well as experiments. This will be the baseline to which we can compare phonological, lexical and morpho-syntactic variation.

III.5.1.1 Morphophonological dialect variables

There are five clear morphophonological dialect variables: (i) form of first-person pronoun, (ii) onset in *wh*-words, (iii) past tense suffix in first declension verbs, (iv) present tense ending of strong verbs and (v) definite singular suffix of feminine nouns. We have in total 1511 observations of these variables. In Table 5 we repeat the morphological forms in the dialect and the written standard for the five variables, and the number of observations per variable and per task.

Note that these variables are not pure phonetic variables: the drop of the voiceless glide /j/ only takes place in the first-person pronoun and not in other words, initial /hv/ or /v/ is not pronounced /k/ in most other words, and the suffixes *-et*, *-er* and *-en* exist in the dialect in other contexts (e.g. neuter definite suffix, present tense weak verb and definite masculine nouns, respectively). The results from the three tasks are given in Figure 3.

We see from Figure 3 that the participants overall mainly use the dialect forms (88.5% of the trials). There is also a clear effect of Test: in the spoken test, the written standards forms are as good as absent (two observations in total with written forms). In the written test, we also see a significant difference between the Read task (18%

Table III.5: Morphological forms dialect and written standard.

	Var.	Dialect	Written standard	# Read	# Produce	# Spok.
form 1.SG pron.	PRON	*æ*	*jeg*	172	104	0
wh, onset	WH	***k**a/**k**em*	*hva/hvem*	286	286	182
Past suffix, decl.1	past	*kast-**a***	*kast-**et***	52	52	39
Pres. suffix, strong	PRES	drikk (apokope)	*drikk-**er***	52	52	39
DEF.FEM, suffix	GEN	*vesk-**a***	*vesk-**en***	78	78	39

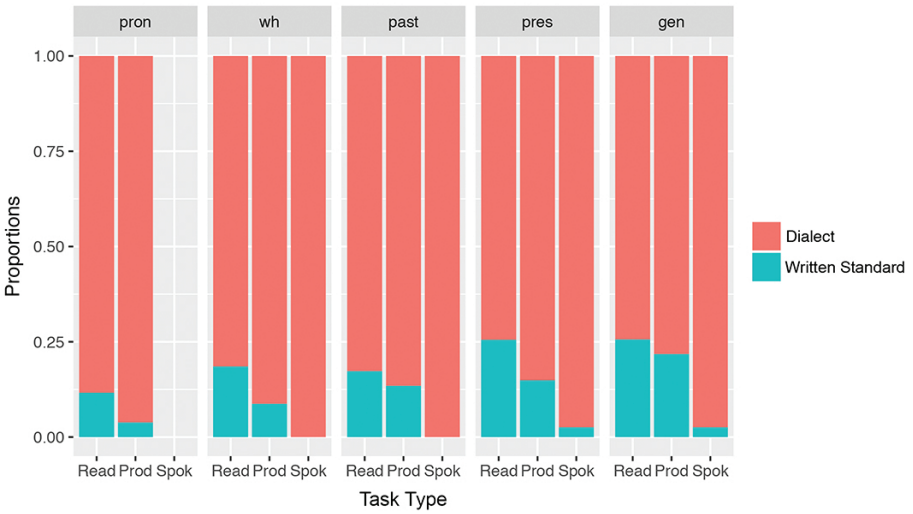


Figure III.3: Proportion of use of morphophonological dialect variables vs. written standard forms across tasks: Read, Prod(uce) and Spok(en).

written stand) and the Produce task (10.5% written standard, $\chi^2(1)= 32$, $p < .001$).[2] There is also an effect of Variable ($\chi^2(4) = 46$, $p < .001$), driven by the relatively high amount of written forms for the variables GEN (19.5%) and PRES (15%) compared to PRON and WH (8.6–8.7%).

The written standard forms are not evenly distributed across the participants. In Figure 4, we plot the proportion of written forms per participant in the Read and Produce task (remember that both these measures are from the written experiment). As we see, most participants are almost fully consistent in their use of dialect forms in the Read and Produce task: eight participants did not produce a single written form, 12 participants were consistent in the Produce task, three participants follow the

[2] All reported *p*-values are obtained from the anova function in R's *lme4* package (Bates et al. 2015). Unless explicitly stated, the models are all logistic (binomial) mixed effects models, with participant and Test and/or Variable as random intercepts.

orthographic form in the Read task, but only one of them sticks to the written form in the Produce task. However, note that all the participants consistently switched to the dialect form in the Spoken task (Figure 3). In short, we see that the phonological forms that match the orthographic representation are rarely produced in any of the tasks of the experiment, with the exception of a handful participants. Below we will correlate the values from the morphophonological variables with lexical, phonological and syntactic variables. The five different morphophonological variables correlate with each other (all *rs* .4–.95), e.g. participants who produce written past tense forms are likely to produce written feminine forms. We will therefore use the averaged values presented in Figure 3 as the measure of comparison (this value will be referred to as 'MPWrit', for 'MorphoPhonological Written form' below).

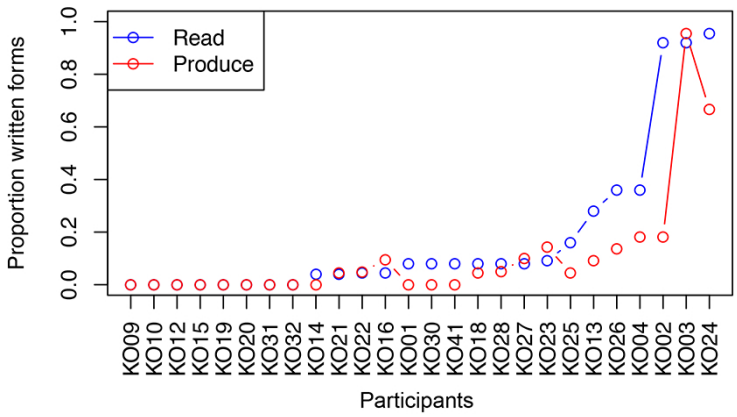


Figure III.4: Proportion of written forms per participant in the Read and Produce task.

III.5.1.2 Lexical variation: *wh*-words

For the lexical variation, we will focus on *wh*-words, mainly due to the fact that we have many data points here. Here we will not consider the realisation of the onset discussed above (*v*/*k*), but only focus on the lexical choice. We investigate the following four *wh*-elements: *hvilken* 'which', *når* 'when', *hvordan* 'how'/'which' and *hva slags* 'what kind'/'which'. For some question words, separate dialectal forms exist. One of these is the form *korsn* (also pronounced *koss* or *kossn*) which can cover the semantics of a range of the other *wh*-words *hvordan* 'how', *hvilken* 'which' and *hva slags* 'what kind'. For the temporal *wh*-word *når* 'when', there is a dialect form that is used in addition to the Bokmål-variant namely *kat.ti* 'what.time' (also *ka tid*). The *wh*-word *hvilken* is not present in the spoken dialect at all (the forms *korsn*, *kordan* and *ka slags* cover the meanings of *hvilken*).

We have 702 observations in total. In Table 6 we give the relevant dialect forms of the *wh*-elements, as well as an overview over the number of observations per task. Note that three of the variables exist in the dialect as well, but with adjusted phonology (*hv* > *k*).

Table III.6: Dialect forms of *wh*-elements.

Standard	Dialect Dialect	Dialect alternatives	# Read	# Produce	# Spoken
hvilken	*N/A*	*kordan, korsn, kass*	78	78	26
når	*når*	*katti*	78	78	26
hvordan	*kordan*	*korsn*	78	78	52
hva slags	*ka slags*	*kordan, korsn, kas*	78	78	26

In the Spoken task, the form provided in the background sentences for *hvilken* and *hvordan* was consistently *korsn*, the form for *når* was *katti* and the form for *hva slags* was *ka slags*. In coding the results, we treated *korsn*, *kordan* and *ka slags* as dialect forms of *hvilken*; *katti* as the dialect form of *når*; *korsn* for *hvordan*; and *kordan* and *korsn* for *hva slags* (we discuss the split between *korsn* and *kordan* further below). The results for the four variables across the three tasks are given in Figure 5.

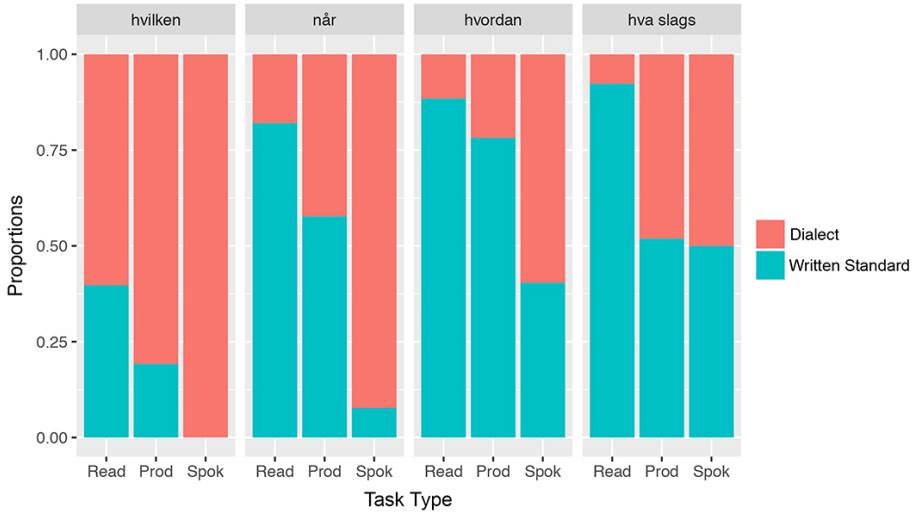


Figure III.5: Proportion of use for the four *wh*-variables.

We see an effect of Test for these lexical variables, similar to the morphophonological variables: the number of written forms is lower in the Produce and Spoken task compared to the Read task. Unsurprisingly, *hvilken* is not produced in the Spoken task at all. Both *når* and *kordan*/*hvordan* are used, despite the fact that they were not given in the spoken background sentence. We find a main effect of Test ($\chi^2(1) = 79$, $p < .001$) and a main effect of Variable ($\chi^2(3) = 151$, $p < .001$), as well as an interaction between Test and Variable ($\chi^2(3) = 8.2$, $p = .042$).

We now investigate if the lexical choice of *wh*-word on the individual level correlates with the morphophonological measures discussed in Section III.5.1.1. We do this by

adding the average written standard measure 'MPWrit' per individual participant into the model. There is no main effect of MPWrit, but a strong interaction between Lexical Variable and MPWrit ($\chi^2(6) = 49$, $p < .001$). We find that both *hvilken* 'which' and *når* 'when' correlate with MPWrit (both $p < .05$): speakers who produce *hvilken* and *når* produce more standardised written forms of the morphophonological variables. However, the effect is considerably stronger for *hvilken* than for *når*. We can tentatively conclude that *hvilken* is a marker of the written standard/Bokmål, while *katti* (instead of *når* meaning 'when') is a marker of the local dialect. The high use of *når* (for 'when'), however, indicates that this form is not exclusive to the written register. We plot the individual variation for *hvilken* in the Read and Produce task with comparison to the baseline written forms (MPWrit) in Figure 6. The plot also illustrates the robust avoidance of *hvilken* by the majority of the speakers in the Produce task (17/26 participants).

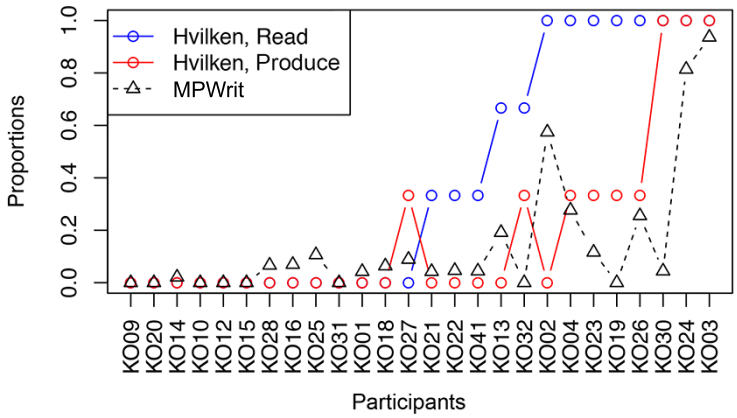


Figure III.6: Proportion of use of *hvilken*.

In the majority of the trials with *hvordan* and *hva slags* in the written experiment, the participants chose the direct dialect equivalent *kordan* and *ka slags*. However, *kordan* is sometimes used for the *hva slags* variable (but never the other way around), and the dialect *wh*-word *korsn* can be used for *hvordan*, *hva slags* and *hvilken*. Only two participants use *ka slags* for *hvilken*. Our results thus indicate that both *korsn* and *kordan* indeed serve as dialect forms for a wide array of *wh*-expressions ('which type', 'which item', 'how') as expected. There are, however, clear individual preferences: some speakers prefer *kordan* over *korsn* and vice versa, but the preferences do not correlate with the dialect features discussed above (morphophonological choices; *hvilken* or *når*). We plot the individual preferences for *korsn* and *kordan* over the three tasks and the three variables *hvordan*, *hva slags* and *hvilken* in Figure 7. We find both categorical *kordan*-users, and categorical *korsn*-users, and speakers who alternate between the two forms (possibly conditioned by meaning or task). In Figure 7 we also plot the average use of written morphological forms to show the lack of correlation between *wh*-choice and dialect morpho-phonology.

Summarizing, we conclude that both *når* and *katti* are available in the dialect for a temporal *wh*-expression 'when'. *Korsn*, *kordan* and *ka slags* are all available

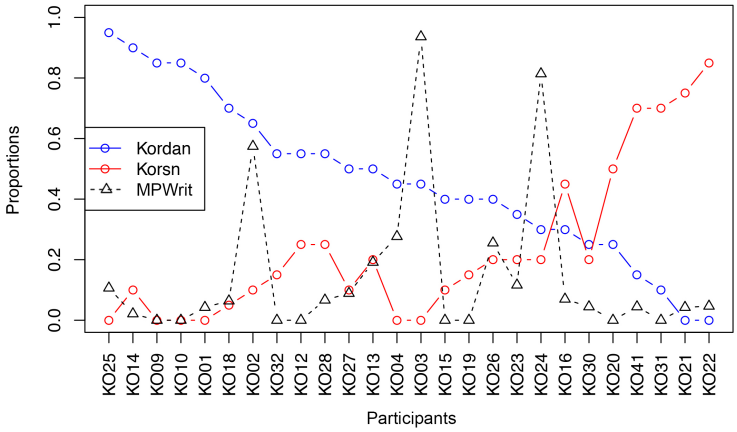


Figure III.7: Proportion of use of *kordan* and *korsn*.

for a large array of *wh*-functions, and most of the variation in their distribution is governed by individual speaker preferences (though we still do not know if factors like the individual's 'dialect' or gender predict form here). *Hvilken* is not present in the spoken dialect and is most often exchanged in the Read (aloud) task, and rarely produced in the repetition task (Produce). The participants who still produce it, are to a large extent the same participants who fail to suppress standardised written morphophonological forms for other variables.

III.5.1.3 Morphosyntax: preproprial articles

In many Norwegian dialects, proper names are preceded by a third person personal pronoun such as *ho Marit* 'she Marit' or *han Ole* 'he Ole'. The use of the pronoun in this way is referred to as 'preproprial article'. In Northern Norwegian dialects, the preproprial article is often used with all names, as well as with family relations like 'mother'or ' father' (Johannessen 2008:170, see also Bull 1996). According to some descriptions, the preproprial article is in fact obligatory in the Northern Norwegian dialects (see e.g. Johannessen & Garbacz 2014). In the written standard Bokmål, the preproprial article is never used.

In our material we have annotated 546 observations of contexts where preproprial articles could occur (78 in Read, 312 in Produce and 156 in Spoken task). This variable differs from the other variables tested, since the participants have to ADD a morpheme, not just CHANGE a phoneme, morpheme or word order. In the spoken test the participants were often given the preproprial article in the background sentence, but this was not fully consistent, as one of our elicitors did not use the article.

We find a clear effect of Test in our results ($\chi^2(1) = 71$, $p < .001$). In the Read task, we find the article in only 10.2% of the trials, compared to 21.2% for Produce, and 50.6% for Spoken. Only three of the speakers used the article in the Read task (two consistently), while as many as 16 used the article at least once in the Produce task, though no one used it consistently. Surprisingly, there is no significant correlation between the use of the article in the Produce task (or any other task) and the use of written standard morphophonological forms (all $ps > .1$). However, the lexical variables

når 'when' and *hvilken* 'which' are both reliable predictors of article use, i.e. speakers who produce few instances of the standard forms *når* and *hvilken* are more likely to produce preproprial articles in the Produce task ($p = .015$ and $p = .01$). Note though that these are just statistical patterns, which do not reflect the existence of categorical grammars: we find, for example, speakers who consistently use the dialect form *katti* (for *når*) but never use the preproprial article, and speakers who consistently use *når* and often insert the preproprial article.

In the Spoken task, there are two strong predictors for the outcome: (i) presence of article in the background sentence and (ii) use of article in the Produce task. Participants use the article in 78% of the trials when they heard the article in the background sentence, but only in 37% of the trials where it is absent in the background sentence. This may suggest that the variation in the result is solely an effect of priming/shadowing, but it turns out that the second factor (ii) is an equally reliable predictor: participants who used the article at least once in the Produce task (N = 16) had an average of 60% articles in the Spoken task, while the corresponding average for the speakers who never used the article in the Produce task (N = 10) was 30% ($R^2 = .43$, $p < .001$). Note also that only five of our 26 participants consistently produced the preproprial article in the Spoken task. This strongly suggest that the preproprial article, in contrast to the morphophonological variables and the absence of *hvilken*, is not an obligatory feature of a spoken register of the participants. The big difference between the Read (10%) and Spoken (50%) task results also suggests that preproprial articles are not activated/generated when dialect speakers encounter names in written language (in contrast to e.g. glide-less first-person singular pronouns, and *-en* to *-a* shifts in definite feminine nouns)

III.5.1.4 Phonological variables

There are a number of interesting phonological variables to test with speakers of the Tromsø-dialect. We include the following: the passive auxiliary *ble* 'become', the form of the negative adverb *ikke* 'not', the phonological form of the preposition *til*.

The auxiliary *ble/blei* is an exponent of an isogloss that runs between Eastern Norwegian (and Swedish) and the rest of Norway. Eastern Norwegian has monophtongised historical diphthongs (e.g. Mæhlum & Røyneland 2012), whereas these to a large extent have been preserved in most other varieties (compare *sten/stein* 'stone', *ben/bein* 'bone'). Both *blei* and *ble* are allowed in the Bokmål orthography, but *ble* is clearly the least marked. There is significant variation in the form of the negative adverb 'not' in Norwegian. The two variants of interest here are *ikke* and *ikkje*. In large parts of Northern Norway, the latter variant is used. In the far north (northern parts of Troms as well as Finnmark), however, the variant *ikke* is more common (Jahr & Skare 1996:56). The standard Bokmål orthography is *ikke*. It has been reported that younger generations in Tromsø also use the variant *ikke*, as opposed to the traditional dialect form *ikkje* which is used more by speakers over the age of 30 (Sollid 2014:118–120). The preposition *til/ti/te/tel* 'to' has no variability in any of the codified written norms: it is unequivocally *til*. In the dialects, however, we find variation, even within dialects. The historical variant *til* seems to have been retained in some contexts but varies between the variants *ti/te/tel* depending on context and/or dialect. This variation is reported in old sources (Aasen 1850:518), as well as newer ones (Norsk Ordbok 2014). We only code our data for the presence or absence of the coda /l/, not the quality of the vowel.

The variables and the results for the three phonological variables are given in Table 7. None of the phonological variables that we tested correlated with other

values for syntactic or morpho(phonological) markedness. The marked form of the passive auxiliary *blei* is used by very few speakers; the majority of speakers use the monophtongised *ble*. For the preposition *til* 'to' , we see an effect of Task: more use of the dialect form *ti* in the Produce and Spoken utterances, but this variable does not correlate with other dialect features. However, it is interesting to see that the /l/ is more present in Read than Produce and Spoken tasks, indicating that the visual orthographic form affects the pronunciation to some extent. It is maybe not very surprising that we find no correlations for the phonological variables, i.e. Norwegian speakers are expected to accommodate or standardise their language with respect to vocabulary, syntax and morphology but seldomly standardise the phonology of their local dialect (Sandøy 2011:119).

Table III.7: Overview of phonological variables. Three rightmost columns show number of consistent speakers.

Variable, task	**# of observ.**	**mean dialect values**	**# dialect value**	**# non-dialect value**	**# both both alternatives**
ikke-ikkje, all	94	10%	2	23	1
ble-blei, all	104	25%	3	16	7
ti(l), Read task	130	68%	10	2	14
ti(l), Produce	130	80%	13	1	12
ti(l), Spoken	65	90%	20	0	6

III.5.1.5 Summary and discussion non-syntactic variables

In the subsections above, we have seen that the school class we are investigating is a fairly homogenous group at least for the core morphophonological variables. The standard written forms are entirely absent in the spoken test, and they are surprisingly infrequent in the written test.

For the lexical variables, we see that the non-dialect item *hvilken* patterns like the morphophonological variables: most participants automatically replace it with a suitable dialect word during reading and repetition. None of the participants use it in the spoken test. We find that many participants change *når* to *katti* in the repetition (Produce) task, but *når* is still produced in a majority of the Produce task, and some speakers changes the input *katti* to *når* in the Spoken task, which suggest that *når*, in contrast to *hvilken*, is not exclusively indexed to the standard written register. We see a similar pattern for the preproprial article. The article is only added in 10% of the trials during reading, but this number goes up during repetition (Produce task) to 20%. In the Spoken task the preproprial article is still only present in 50% of the trials. Most speakers produce proper names both with and without the article, but there are individual differences in the baseline use, as indicated by the within-speaker consistency across the two experiments. This is unlikely to be an effect of rampant code-switching but should rather be treated as an inherently variable pattern. We will return to this in the concluding discussion.

We find effects of Task across all variables: there are more non-dialect forms in the Read than in the Produce task, and more non-dialect forms in Produce than Spoken, i.e. the dialect forms increase the further away from the written source we get.

The effect of task for the phonological variable *til*, as well as the morphophonological variables past, present and gender, suggest that the graphemes present in the elicitation stimulus sometimes affect the pronunciation, and thereby trigger the production of standard written forms. The effect of task is also clear for preproprial articles and lexical choice of *wh*-words and present for most speakers. Some speakers are better at directly activating the dialect lexicon/grammar and show little or no interference from the written forms.

As we move on to the syntactic variables, we have now established two different contexts (i.e, the written and spoken elicitation modes/experiments) that differ in the amount of standard (written) PhonMorphLex exponents, and we can now investigate if the syntactic variables differ in a similar way between the two contexts. We have also established that there is inter-speaker variation, such that some speakers are more likely to produce standard PhonMorphLex exponents than others, and we can now test if the same participants are more likely to produce non-dialect syntactic patterns.

III.5.2 Syntactic variables.

For the syntactic variables, we only have two measures per variable: the Produce and the Spoken task (the Read task sentence is invariable). Below we will start looking at the most obvious dialectal or colloquial variables, and then look at variables less obviously tied to a dialect/vernacular.

III.5.2.1 Non-V2 in questions

The first variable we look at are the characteristic Northern/Western Norwegian V2-exceptions in *wh*-questions. We investigate two types of non-subject questions and two types of subject questions: questions with short *wh*-words (*kem* 'who', *ka* 'what', *kor* 'where') and questions with long *wh*-words (*når*/*katti* 'when', *kordan*/*korsn* 'how'); see Table 8.

Table III.8: Overview of types of *wh*-questions in experiment.

Question type	Dialect	Written standard	# Produce	# Spoken
V3, SHORT OBJQ	V3 >V2	Only V2	104	104
V3, LONG OBJQ	Only V2	Only V2	52	52
SOM, SHORT OBJQ	SOM or V2	Only V2	104	104
SOM, LONG OBJQ	Only V2	Only V2	52	52

We elicit these questions with the embedded-to-main transformation. Participants can in principle give three types of felicitous responses in this task: a regular main clause V2 question, a question with embedded word order, i.e. V3, or a cleft question. We give examples of the three alternatives for non-subject questions following a background sentence in (17b–d).

(17) a. Spør Eline kem ho Marit e ilamme.
ask Eline who she Marit is together.with
'Ask Eline who Marit is in a relationship with.' [Background]
b. Kem e (ho) Marit ilamme? (V2)
who is she Marit together.with

c. Kem (ho) Marit e ilamme? (V3)
who she Marit is together.with
d. Kem e det (ho) Marit e ilamme? (cleft)
who is it she Marit is together.with
'Who is Marit in a relationship with?' [Target]

In the coding we use the abbreviations SV (Subject–Verb, i.e. V3), VS (Verb–Subject, i.e. V2) and CLEFT for non-subject questions. For the subject-questions there are also three possible realisations: a regular main clause question (V2, coded as NON), an embedded structure with the complementiser *som* (coded as SOM), or a cleft question. The results for the main clause *wh*-questions in the two experiments are shown in Figure 8 with non-subject questions on the left and subject *wh*-questions on the right.

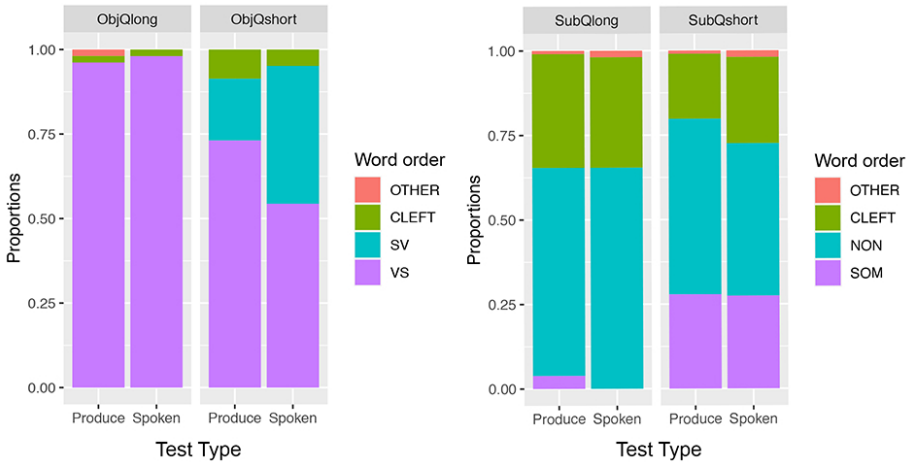


Figure III.8: Left: Proportion of word orders in NON-SUBJECT questions with long and short *wh*-words across the two experiments. Right: Proportion of word orders in SUBJECT questions with long and short *wh*-words across the two experiments.

We will first discuss non-subject questions. Here, we find that V3 word order (SV) is categorically absent for the long *wh*-phrases, as expected. However, this result is important, as it shows that the participants are not simply repeating the word order in the embedded background sentence (i.e. V3/SV). We see an effect of Test for the short *wh*-words: V3 word order is more common in the spoken test (40.8%) compared to the written test (18.3%). Clefts are produced only rarely. These results initially suggest that the written stimulus is directly responsible for the low proportion of V3 in the written test. However, the set-up and the material in the spoken test differ from the written in several aspects. The material was set up so that the questions often yielded second person pronominal subjects, e.g. 'Ask Eline where she lives' (background) – 'Where do you live?' (target), and as is already known, pronominal subjects are more likely to trigger V3 than noun phrase subjects (e.g. Westergaard & Vangsnes 2005). A closer look at the material reveals that the items with second person pronominal subject have V3 in a majority of the trials (62.5%), while the non-pronominal subjects in the

spoken test have V3 frequency similar to the written test. The difference between the two modalities may thus be triggered by the linguistic content, and not the modality per se. We also find a strong correlation between the individual response patterns in the written and spoken experiment: people who produced V3-questions in the Produce task were more likely to produce a large proportion of V3 questions in the Spoken task ($R^2 = .38$, $p < .001$). Still, most participants produced both V2 and V3 across experiments, and no-one produced V3 consistently (in the constructions where this is grammatical in the dialect).

Turning now to the subject *wh*-questions (Figure 8, right panel), we see that, as expected, the embedded word order (SOM) is not used with long *wh*-words. This again suggests that participants do not simple copy the word order from the background sentence in their responses. For the short *wh*-words, we see no effect of Test: the embedded structure (SOM) is produced in 27% of the trials in both tests. We see a correlation between the response patterns in the Written and the Spoken test, but less strong than for the non-subject questions ($R^2 = .17$, $p < .01$). The response patterns for the subject questions and the non-subject questions correlate strongly ($R^2 = .51$, $p < .001$), i.e. participants who produce a high proportion of V3 object questions also tend to produce a high proportion of V3 subject questions. We further find that a small group of the participants fully avoid the non-V2 structures in the written test (N = 6). Again, none of the participants produce non-V2 consistently across the two experiments (one speaker consistently uses non-V2 in the spoken task) and in the spoken experiment, the majority of the participants alternate between V2 and non-V2.

We can tell from the recordings that no trial contains a non-V2 question produced with any of the written standard morphophonological features. Yet, we find plenty of V2 questions (i.e. standard form) produced in utterances that only contain dialect forms of the PhonMorphLex variables. Furthermore, we find no correlations between the participants' general non-V2 production (in either spoken or written test) and their overall use of written standard morphophonology (our measure MPWrit). Surprisingly, we also find no significant correlations between non-V2 and the use of preproprial articles, or choice of lexical *wh*-element either (all $R^2 < .05$ for both written and spoken values). In the sample we find participants who consistently use the preproprial article while never producing a non-V2 question and vice versa. In short, there is no evidence for co-variation between PhonMorphLex variables and this syntactic variable.

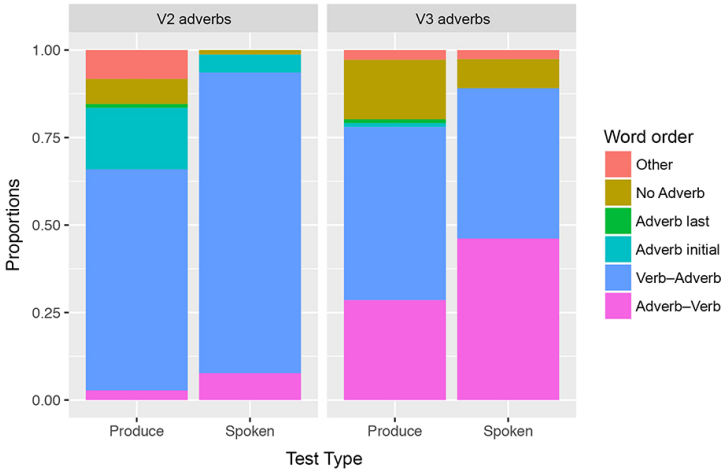
III.5.2.2 V3 with adverbs

We have in total 598 observations of Adverb–Verb sequences, distributed over two conditions (V3 adverbs and regular V2 adverbs) and the two tests as shown in Table 9. We show the results for the two types of adverbs in the two tests in Figure 9. For this variable we have more than two possible realisation options: the adverb may turn up in sentence-initial or sentence-final position, in addition to the expected V2/V3 position (coded as AV/VA). In addition, the adverb is sometimes dropped.

Table III.9: Overview of V2 and V2 adverbs across tests.

Type of adverb	**Variable**	**Dialect**	**Written standard**	**# Produce**	**# Spoken**
Preverbal	V3ADV	V2 or V3	V2 >V3	182	156
Regular	V2ADV	Only V2	Only V2	182	78

Figure III.9: Proportion of different word orders in main clauses with regular (V2) adverbs and preverbal (V3) adverbs across the two experiments.



We find a relatively small amount of 'errors' with the regular V2 adverbs (i.e. V3 order with regular adverbs (pink colour)) which look mainly like random production errors (3 participants in the Produce task, and 5 participants in the Spoken task). There is a noticeably high amount of adverb-initial clauses in the Produce task as compared to the Spoken task, which we currently cannot explain.

For the V3 adverbs, we see a significant effect of Test (28%–46%, $\chi^2(1) = 12.8$, $p < .001$). The effect is partly driven by a large amount of adverb-drop responses in the Produce task. Partially, this difference is explained by the fact that some adverbs were changed between the tests, due to noticed difficulties in the written experiment. Still, even when we take this into consideration, there is a small effect of Test, indicating that the V3 structures are slightly more accessible in a fully spoken setting. We find a weak correlation between the results in the Produce and Spoken task ($R^2 = .2$, $p = .013$), i.e. speakers who produce V3 in the written test are more likely to produce V3 in the spoken test. No correlations are found between V3 with adverbs and any of the other dialect/spoken register indicators (preproprial articles, non-V2 in questions, *wh*-lexicon or morphophonological variables). We also find that many speakers alternate between V2 and V3 orders for this variable within the experiment. Furthermore, the V2 order with preverbal adverbs is often produced in utterances which contain no written standard PhonMorphLex exponents.

III.5.2.3 Main clause word order in embedded clauses.

In the previous section we looked at word order in main clauses. We will now turn to embedded clause word order which we elicited with the main-to-embedded transformation. We look at two types of embedded clauses below: *that*-clauses with sentence adverbs in the assertive complement of a bridge verb, and embedded questions (subject or non-subject questions). An overview of the variables and the number of observations per variable and test is given in Table 10.

Table III.10: Overview of types of embedded clauses.

Type of embedded clause	Dialect	Written standard	# Produce	# Spoken
Emb. V2, bridge	V2 or V3	V2 >V3	260	182
Emb. subject quest.	Only V3	Only V3	182	78
Emb. non-subject quest.	Only V3	Only V3	104	52

We start with investigating embedded V2 under bridge verbs, i.e. assertive contexts. Two of the adverbs used (*alltid* 'always' and *ofte* 'often') in the test can be used either as VP-internal adverbs or TP adverbs, while the other two are strict TP adverbs (*aldri* 'never' and *ikke* 'not') (see discussion in Section III.3). We show the results in Figure 10, adverb by adverb. We find no effect of Test ($\chi^2(1) = 0.001$, *ns*), but we find an effect of Adverb Type ($\chi^2(1) = 9.7$, $p < .01$): there are significantly fewer Verb–Adverb orders with the unambiguous TP-adverbs (*ikke*/*aldri*, 8%) compared to potential VP-adverbs (*alltid*/*ofte*, 22.5%). There is no interaction between Test and Adverb Type. Overall, we see very few instances of Verb–Adverb order with the unambiguous TP-adverbs. Only 4 participants in total produce this order: two of them only once, but the other two more consistently. As we will discuss below, this variable patterns more with other 'ungrammatical' variables such V3 with sentence adverbs, and main clause word order in embedded questions, than the dialect/colloquial variables like V3 in questions. Note that this does not mean that embedded V2 with negation is ungrammatical in Northern Norwegian; it should rather indicate that the context we set up is not a suitable context for embedded V2 (for reasons we do not yet know, see Westendorp 2020 for discussion).

For the potential VP-adverbs, we find more variation within and between participants: 16 of 26 participants produce both Verb–Adverb and Adverb–Verb order in the experiment, one participant produce Verb–Adverb consistently and nine participants stick to Adverb–Verb. We find a within-speaker correlation between the Produce task and the Spoken task ($R^2 = .28$, $p < .01$), i.e. participants behave similarly across the two tasks. It should also be noted that the two participants that produced a substantial amount of Verb–Adverb order with *ikke*/*aldri*, also produced a high amount of Verb–Adverb orders with the potential VP-adverbs. We find only a weak correlation between VA with potential VP-adverbs and non-V2 in main clause questions (p= .039). We find no correlations between embedded Verb–Adverb and the morphophonological, phonological, morpho-syntactic or other syntactic variables.

The final variable we looked at was main clause word order in embedded questions. Here, we were interested in seeing if participants sometimes used a main clause structure in an embedded clause (as signalled by verb and subject placement). For non-subject questions, this means we would find subject-verb inversion in an embedded clause ('I wonder what bought Mary in the store'), and in subject questions this means the lack of the complementiser/relative marker *som*. None of these structures are available in either the written standard or the spoken dialect, other than as echo-questions or quotes. The results revealed only scattered main clause word orders, that were slightly higher for subject questions (drop of *som*, 8.9%) than for objects questions (subject-verb inversion, 4.6%). This difference is almost fully explained by the production of one English-Norwegian bilingual participant, who consistently dropped *som* in the subject questions (as in English), while producing target-like Subject–Verb orders in object

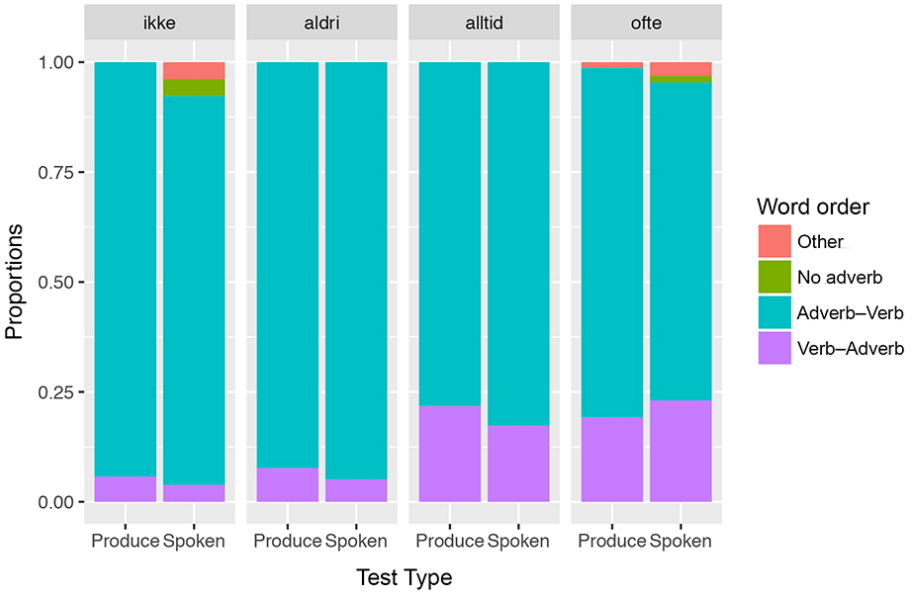


Figure III.10: Proportion of word orders across the two experiments with different adverbs.

questions (again, just as in English). Otherwise, we find non-systematic scattered 'errors', probably due to a quotation strategy. Note, however, the proportion of main clause word orders for this variable is similar to the proportion of embedded Verb–Adverb order with the TP adverbs *ikke*/*aldri* 'not/never' (Figure 10). This may suggest that the few attested Verb–Neg orders in the results are indeed full main clauses.

III.5.2.4 Summary syntactic variables

For all the syntactic variables tested, we found that participants produced both the 'standard' and the 'vernacular' word order, and the variation was abundant even in the utterances that only contained dialect forms of the PhonMorphLex variables. Noticeably, the word order associated with the vernacular/dialect was not produced in more than 50% of the trials for any of the variables in the spoken test, which was otherwise characterised by almost a categorical use of dialect PhonMorphLex exponents.

Overall, we find still a significant effect of Test: there are more dialectal/colloquial elicited word orders in the spoken elicitation experiment (24.9%) than in the written elicitation experiment (14.8, $\chi^2(1) = 19.8$, $p < .001$). The effect of Test is driven by two variables: V3 in non-subject questions, and V3 in sentences with preverbal adverbs. However, as was mentioned in the relevant subsections, for both these variables the stimuli were slightly changed between the tests, and these changes account for some or all of the difference in the results. The remaining effect of elicitation method is negligible. On the level of the individual there were no correlations between the

syntactic and PhonMorphLex variables, i.e. speakers who produced many dialect PhonMorphLex forms, did not produce more vernacular/dialect word orders.

In the conditions where we in principle could elicit ungrammatical responses (non-V2 with long *wh*-words, V3 with sentence adverbs, main clause word order in embedded questions), we find no difference between the two modalities (3.8% written, 4.8% spoken).

We find a high degree of intra-speaker consistency between the two experiments: speakers who produced a high proportion of a certain form in the written test, were also likely to produce a high amount of that form in the spoken test. There were further correlations between some of the 'grammatical' syntactic variables, namely non-V2 in subject and non-subject questions and embedded V2 with *ofte*/*alltid* 'often/always'. We plot the within-speaker consistency between the two tests in Figure 11. Note that none of the participants are categorical in their responses.

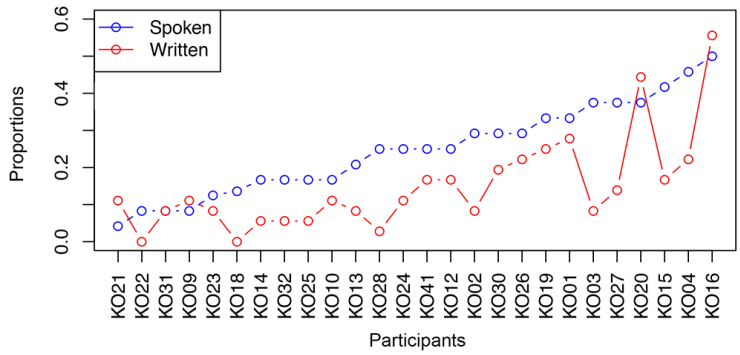


Figure III.11: Proportion of dialect/vernacular word order for main clause questions (short) and embedded Verb–Adverb order with *ofte* and *alltid*, across the two experiments.

Overall, the variation seems to be conditioned more by the speakers than the mode of elicitation. In Appendix A (Table 11) we give a full overview of the correlations within individuals per variable, and the effect of the elicitation mode per variable.

III.6 Discussion

III.6.1 Summary of results

We see a trend throughout this study that more dialectal or colloquial features are present in the spoken test compared to the written test, and within the written test, we see this trend between the Read and Produce task as well. That is, the further away from the written source, the more dialect features we see, which is not surprising. However, the results look different depending on what type of variable we focus on. The morphophonological standard forms are completely absent in the spoken mode (Section III.5.1.1). This is true for the written standard *wh*-word *hvilken* as well. However, even in the written test, the standard forms of these variables are rarely produced, and most speakers never produce them at all. For the choice of *wh*-word (Section III.5.1.2) and

presence of preproprial articles (Section III.5.1.3), we find a strong effect of task as well. For these variables, we find plenty of variation both within and between participants even in the Spoken task, e.g. alternation between *korsn – kordan*, *når – katti*, and presence/absence of the preproprial article.

The pattern looks different for the syntactic variables. The effect of task is much less reliable here. For subject questions and embedded word order, we find no effect of task at all. For object questions and main clause V3 with preverbal adverbials, we find an effect of task/elicitation method in the expected direction (i.e. more dialect/vernacular forms in the spoken test). However, this effect seems to be due to the change of stimuli rather than elicitation method, especially for the object questions: the spoken test included more pronominal subjects, which increased the responses of non-V2 questions. In most of our elicited responses in the Spoken task, we find variable syntax in the absence of phonological, morphological and lexical variation. We furthermore find no syntax–PhonMorphLex correlations on the individual level, and as discussed above, we find no straightforward effect of 'context' (here, elicitation method) on the choice of word order. In short, there is nothing in our results that suggest that the syntactic variation tracks the variation of the non-syntactic variables.

III.6.2 Discussion of results

These results give rise to two questions: (i) can we account for the syntactic variation in terms of shifting between different grammars, and (ii) to which extent do young dialect speakers access a special 'standard' register that is at least partially different from a spoken register when reading? Starting with the first question, we can conclude that the syntactic variation is present in the written test, and most crucially, the syntactic variation is persistent in the spoken test, where standard morphophonological features are completely absent. As was stated at the start of the article, contrasting a code-switching account of variability to a within-grammar optionality account is only meaningful if we assume that a grammar is characterised by a shared set of lexical, morphological, phonological and syntactic properties, or alternatively strongly associated with a certain sociolinguistic context. If we find syntactic variation in phonologically, lexically and morphologically invariant contexts, the variation cannot meaningfully be characterised as language mixing. However, one may still argue that the activation of different linguistic levels may be partly dissociated, e.g. the syntactic dimension of a grammar may be more likely to be activated than the morphology in a certain context (for whatever reason). We do not find support for this idea in our results. Apart from attesting syntactic variability in morpho/phono/lexically invariant contexts, we find no clear evidence of a higher degree of activation of non-dialect syntactic patterns in the presence of non-dialect features. For most of our syntactic variables, the vernacular/dialect forms were produced to an equal extent when the standardised language was highly present (written test) as when standardised language was fully absent (spoken test).

As discussed in Section III.2, the main source of variation in speech is presumably semantics and pragmatics: people vary their linguistic output because they want to convey different linguistic messages, e.g. the choice between the order 'the dog chased the cat' and 'the cat chased the dog' is presumably fully dependent on the message you want to convey. When studying syntactic variability, it is always hard if not impossible to rule out meaning-based explanation of the variation. Can we ever be sure that a speaker who utters *Ka du sa?* ('what you said') intends to convey the same message as a speaker who utters *Ka sa du?* ('what said you'). In our study, we tried to limit the

impact of semantic and pragmatic factors by sticking to a highly constrained elicitation paradigm. We find it unlikely that semantic and/or pragmatic factors can account for the variation in our results, yet we cannot fully rule it out.

For the second question, our results suggest that in general, a written input signal activates the same grammar as spoken input. As stated above, we see a significant effect of elicitation mode, but this is to a large extent driven by a small set of participants. Most participants seem to directly access the morphophonology of the dialect grammar. Of course, participants were instructed to read the sentences in a colloquial style, but the very smooth access to the dialect forms (as evident from the audio recordings) and the small number of intrusion errors in the reading suggest that phonological representations of the native/dialect forms are directly accessed through written standard orthographic forms. In some sense, the fact that a Northern Norwegian speaker accesses the phonological representation /kem/ when s/he is exposed to the word *hvem* 'who' is no different from an English speaker accessing the representation /hu/ when exposed to *who*. Here, we would like to speculate how the written language affects the spoken dialect. In principle, one could imagine dialect speakers treating the standard written input and the spoken dialect as completely different languages. The written language could in principle activate a phonology and a morpho-syntax that is different from the spoken language. If this was the case, one would expect relatively little influence of the written standard on the spoken dialect. However, if we assume that dialect speakers directly access the morphophonology of the dialect when reading, e.g. *æ* for *jeg* 'I', *venta* for *ventet* 'waited', *veska* for *vesken* 'the bag', the written input should presumably be treated as 'dialect input', and this input could potentially have a huge effect on the spoken dialect. It seems, however, less likely that speakers automatically access word order templates or syntactic structures associated with the spoken dialect. That is, reading *Hva drikker du?* 'What do you drink?' may activate the local morphophonological forms (*ka*, *drikk*) but not necessarily an inverted word order (*wh*-–subject—verb). Furthermore, it is unlikely that words or morphemes that are never present in the written source would be activated during reading, e.g. preproprial articles or *som* in main clause subject questions. The written input can thus be seen as a dialect input completely void of the morpho-syntactic dialect markers (e.g. V3 in questions, preproprial articles). This presumably leads to parts of the dialect grammar being directly affected: the overall proportion of V2-questions and names without preproprial articles in the speaker's input will depend on how much of their input is in written form. This should give rise to both different speaker-specific baselines and general optionality. We find some evidence for this in the fact that there is a general consistency within participants across the two tests, which suggests that some of the variation is explained by speaker-specific baseline ratios. Still, only a small number of the participants are consistent throughout the two tests with respect to any of the variables. Follow-up studies should directly focus on correlating between reading habits and dialect syntax patterns within individuals, and also investigate whether individuals who are more prone to dissociate written language from spoken language display less optionality in their spoken dialect production.

III.6.3 Open questions and speculations

The proportion of colloquial or dialect forms in our material is admittedly lower than in corpus studies based on spontaneous spoken language. Non-V2 word order in questions in the Tromsø dialect is estimated to be around 70% (Vangsnes & Westergaard 2019); V2 in embedded *that*-clauses with negation is found in 43% of the relevant clauses

(Ringstad 2019, see also Bentzen 2014b); and according to Johannessen & Garbacz (2014), preproprial articles are obligatory in most Norwegian dialects, including the Tromsø dialect. The discrepancy between these numbers and our numbers makes it tempting to conclude that we have not managed to access or activate a true dialect register in our study. Before concluding that, a couple of things should be taken into consideration. First, in for example the Nordic Dialect Corpus (the corpus used in the studies mentioned above, Johannessen et al. 2009), the speakers are slightly older, and usually also handpicked for the recordings because they are known to speak the local dialect. In Tromsø today, as in most larger towns in Norway, we can assume that many speakers have a more mixed dialect background, even though they still often conform to the classic dialect traits of their hometown. It is therefore highly likely that the high school students of today speak a more levelled dialect compared to the speakers in the Nordic Dialect Corpus. Secondly, spontaneous speech in a conversation often has a high amount of formulaic expressions, such as simple questions like *Ka du sa?* 'What did you say?' and *Ka du tror?* 'What do you think?', which may push up the number of non-V2 questions reported in corpora. Something similar can be said for embedded V2. As we discussed earlier, the high proportion of first-person subjects in conversations may increase the potential contexts for embedded V2 ('I think that ...'/'I believe that ...'/'I said that ...'). Likewise, there may be other patterns in how proper names are used in conversations (names will refer to people known to both speaker and hearer), while in our experiment, the names refer to unknown people. We thus feel relatively confident that we have captured the vernacular of Tromsø teenagers in our spoken elicitation paradigm.

III.7 Final thoughts

To successfully acquire a language, the learner needs a huge amount of input. Only by aggregating over data from a large number of speakers and contexts may a learner approach native-like competence. This is especially true in the acquisition of subtle morphosyntactic patterns that are scarce in the input. First language (L1) learners may not fully master some of these patterns until they are well into their school years (see e.g. Anderssen et al. (2010) on acquisition of object shift). At this point most individuals have received plenty of input from sources outside the local speech community, e.g. from written texts, TV and friends, family and teachers with different linguistic backgrounds. Although it is clear that a learner does not build up a new grammar for every new person or language source she encounters, it is also clear that the learner may detect that not all of the linguistic input belongs to the same grammar. In a prototypical bilingual setting, the L1 language learner will from early on separate the input into different 'languages' (see e.g. Meisel 2004). A child growing up in a bilingual environment will learn that certain word orders, morphological classes, phonemic contrasts and lexical items are restricted to only one of the languages in the environment. Now, we do not know how different the input from two speakers or contexts has to be for a language learner to identify them as two different 'languages'. We do not even know if sociolinguistic context is a more important factor than typological similarity for language separation. This question is particularly relevant in a linguistic context like the one in Norway, where speakers are constantly exposed to different dialects. Previous experimental research on this topic has shown that young speakers in Western Norway who use Nynorsk rather than Bokmål as their main written language appear to make a strict division between their local dialect and the Eastern Norwegian/Oslo dialect,

which they associate with the written language Bokmål (see Lundquist & Vangsnes 2018). As for the Northern Norwegian dialects, which mainly consist of speakers who read and write in Bokmål, we have not found equally strong indications of language separation between the local dialect and the 'standard' or Eastern Norwegian language (see Lundquist et al. 2016 for discussion). The results from the current study strongly suggest that the Northern Norwegian speakers/learners treat the written Bokmål input as part of their 'language'. During acquisition (which goes on for at least the first 10–15 years of life), we assume the learner will extract morphosyntactic patterns from both the written and spoken sources to build up a grammar. As our results indicate, this grammar contains a certain amount of optionality, i.e. non-deterministic mappings from meaning to form. It is not unlikely that the syntactic variables we investigate in this paper were more categorical at an earlier stage, and that variation in previous generations was better characterised as code-switching between a vernacular and a national standard language. Through increased contact between different dialects, and possibly as a result of a more important role of the written language over the last 100 years, the discussed syntactic patterns appear to be part of the local dialect today. As we see in our data, the proportion of the 'standard' word order patterns is above 50% for all variables we investigate. If this indeed is what the input looks like for the Northern Norwegian language learners, it is unlikely that these word orders are not associated with the L1 grammar.

There are clearly many questions remaining. The relation between a written language and a spoken language is still in many respects a mystery, especially with respect to dialectal micro-variation. We have assumed in this article that a written input activates linguistic representations in the reader that are in many ways similar to the representations that are activated during both speaking and spoken language perception. We base this assumption on recent psycholinguistic research on the activation of phonology during reading. Note also that a long tradition of neuro- and psycholinguistic research has found similar behavioural and neural responses in experiments based on written and spoken stimuli. Still, even if the representations activated in the reader are, as we speculate, similar to those activated during speaking and listening, it is still obvious that the reader has expectations about the surface syntactic patterns of the standard written language. For example, a Northern Norwegian dialect speaker would not expect a V3 question in written standard Bokmål. It is also clear that the Northern Norwegian dialect speaker has knowledge about which word orders, lexical forms and prosodic patterns are licit in spoken Eastern Norwegian, to the extent where they can pick up patterns and reproduce them e.g. in role-playing language (see, Strand 2020).

Supplementary material. To view supplementary material for this article, please visit https://doi.org/10. 1017/S0332586520000190

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Appendix III.A

See table next page.

Table III.11: Overview of the correlations within individuals for syntactic variables.

Variable name	**Dialect/colloquial/ grammatical status**	**Correlation individual/tests (R^2, p-value)**	**Effect of test % (difference, spoken-written)**	**Correlation with syntactic variables**
V3-non subQ, Short	OK Dialect *Written Standard	$R^2 = .38$ $p < .001$	12.5 (40.8–12.3) $p < .001$	som-subQ short, EV2 (ofte, alltid)
V3 non-subQ, Long	*Dialect *Written Standard	N/A	0	N/A
Som, subQ, Short	OK Dialect *Written Standard	$R^2 = .17$, $p = .018$	0 (27–27)	som-subQ short
Som, MC subQ, Long	*Dialect *Written Standard	N/A	–3 (0–4)	V3-non-subQShort
V3 preverbal adverb	OK Coll, W.S. Coll >W.S.	$R^2 = .19$, $p = .013$	18 (46–28) $p < .001$	None
V3 sentential adverb	*Dialect *Written Standard	$R^2 = .08$ NS	4.9 (7.6–2.7)	None
EV2, *ikke*, *aldri*	OK Coll, W.S. Coll ->W.S.	$R^2 = 3$, $p < .01$	–1 (6.7–5.7)	None
EV2, *ofte*, *alltid*	OK Coll, W.S. Coll ->W.S.	$R^2 = .28$ $p < .01$	–0.7 (20.5–19.8)	V3-non subQShort
EmbObQ, MC	*Dialect *Written Standard	($R^2 = .42$, $p < .01$)	–1 (3.9–4.9)	N/A
EmbSubQ, MC	*Dialect *Written Standard	($R^2 = .29$, $p < .01$)	3.8 (11.5–7.7)	N/A

Paper IV

Unstable verb placement and the North Germanic CP

Maud Westendorp & Björn Lundquist

Full title: “Unstable verb placement and the structure of North Germanic main and embedded clauses"
Submitted for publication.

Abstract

In this paper we present two data sets where verb placement is variable and deviates from the standard asymmetric V2 pattern of North Germanic: embedded clauses in Faroese and main clause *wh*-questions in Sogn Norwegian. We show that there is variation in the position of the verb, not only between languages, but within languages and within speakers. This within-language and within-speaker variation we observe, leads us to conclude that verb placement in North Germanic cannot be grammaticised in terms of size of the embedded complement or in terms of features in the C-domain as in earlier accounts. As an alternative, we propose a uniform syntactic structure for main and embedded clauses in North Germanic. We argue that verb position is non-categorical in North Germanic and correlated with assertion semantics (embedded clauses) and prosody and lexicon (Sogn Norwegian main clauses).

IV.1 Introduction

The modern North Germanic languages (i.e., Danish, Norwegian, Swedish, Icelandic and Faroese)[1] all share the property of Verb Second (V2), the constraint that the finite verb appears in ‘second position’ in main clauses directly after the initial constituent, as in the Swedish example (1) below.

(1) Igår **kom** Ida för sent till skolan.
yesterday came Ida too late to the.school
‘Ida was late for school yesterday.’

Following Den Besten (1983) this order is commonly thought to be the result of movement of the finite verb to a high position in the left periphery, namely C. The initial position is subsequently filled by movement of some other constituent to the

[1] References to ‘Norwegian’, ‘Swedish’ etc. in the text are to the standard varieties of these languages, unless specified otherwise.

specifier of this head. In the Mainland North Germanic (MNG) languages, the finite verb does not move to this high position in embedded clauses. Instead, it surfaces together with other verbs in the sentence, after the subject and sentence adverbs but before the object (see (2)). This position is usually taken to be the at the left edge of the verb phrase. This means that there are two positions for verbs in MNG: C and v. Only one verb can surface in the V2 position, while many verbs can cluster up in v.

(2) Johan sa [att Ida inte **borde vara** sen igen imorgon].
Johan said that Ida not should be late again tomorrow
'Johan said that Ida should not be late again tomorrow.' [*Swedish*]

The low (v) placement of finite verbs in embedded clauses is in general taken to be triggered by the presence of a complementizer in C: the complementizer occupies the V2 position, which leads the verb to surface in vP:

(3) [$_{CP}$ Igår [$_{C}$ **kom**$_i$ [$_{IP}$ Ida [$_{vP}$ t$_i$ för sent till skolan.]]]] [main clause]

(4) ... [$_{CP}$ ∅ [$_{C}$ att [$_{IP}$ Ida inte [$_{vP}$ **borde** vare sent igen.]]]] [embedded clause]

The idea that the complementizer occupies the V2 position can be applied not only to the North Germanic languages, but to all V2 languages: when C is filled by the complementizer, the finite verb surfaces in a lower position (v or T/I, depending on the language and analysis).

This analysis also captures the fact that objects and adverbials cannot surface to the left of the subject in embedded clauses, i.e., embedded topicalization is not allowed in embedded clauses, or more generally, in clauses without V-to-C movement. This is one of very few robust generalisations in the V2 literature: no North Germanic variety allows for topicalizations in the absence of V2, as in (5) (as opposed to a Germanic, non-V2 language like English).

(5) *Johan sa [att igår Ida (inte) **kom** för sent till skolan].
Johan said that yesterday Ida (not) came too late to the.school
int. 'Johan said that Ida didn't come late for school yesterday.' [*Swedish*]

The languages we focus on in this paper, i.e., Danish, Faroese, Norwegian, and Swedish, have some peculiar characteristics that have been the centre of the discussion of V2 in North Germanic over the last 15 years. Firstly, recent research has shown that main clause word order, i.e. V2, is present in a surprisingly large number of embedded clauses, co-occurring with the complementizer, as in (6) (see e.g., Vikner 1995, Julien 2007, Bentzen 2014b, Ringstad 2019).

(6) Johan sa att Ida **tar** alltid bussen till skolan.
Johan said that Ida takes always the.bus to the.school
'Johan said that Ida always takes the bus to school.' [*Swedish*]

Secondly, in some dialects of North Germanic, we find embedded word order in main clause *wh*-questions, cf. the main clause question in (7-a) with the embedded question in (7-b) (e.g., Nordgard 1985, Taraldsen 1986, Vangsnes 2005, Vangsnes & Westergaard, Westergaard et al. 2017, Westendorp 2018).

(7) *Norwegian*

a. Ka ho Ida alltid **gjør** om morran?
what she Ida always does on the.morning
'What does Ida get up to in the morning?'
b. Synne spurte ka ho Ida alltid **gjør** om morran.
Synne asked what she Ida always does on the.morning
'Synne asked what Ida get up to in the morning.'

Thirdly, the Mainland North Germanic languages allow extractions from several types of embedded clauses where extraction otherwise is unavailable cross-linguistically (including the other Germanic languages) (e.g., Hrafnbjargson et al. 2010, Christensen et al. 2013, Kush et al. 2018).

In this paper, the empirical focus is on the first two properties, but we will make reference to extractions as well to support our account of verb placement in North Germanic. Our main claim is that complementizers and finite verbs do not occupy the same structural position. Furthermore we will argue for a symmetric approach to main and embedded clauses, where regular *that*-clauses are structurally identical to subject-initial main clauses, modulo the position of the verb. It follows that the placement of the verb is less strongly linked to the main–embedded distinction than usually thought.

Our approach shares some components with several recent accounts of V2 where the complementizer does not target the same position as the finite verb (e.g., Wiklund et al. 2009, Julien 2015, Julien 2020, Nyvad et al. 2017). Such accounts have been influenced by cartographic approaches (Rizzi 1997, Cinque 1999), where the left periphery is split up into several projections. To explain the optional V2 order co-occurring with an overt complementizer (as in (6) above), these analyses propose that the complementizer is selecting a complement of a certain size: a FinP (Julien 2015) or IP (Wiklund et al. 2009, Nyvad et al. (2017) in regular non-V2 embedded clauses, or a ForceP or CP in embedded V2 clauses (Wiklund et al. 2009, Julien 2015, Nyvad et al. 2017). Although these approaches easily handle the co-occurrence of V2 and a complementizer, they have less straightforward answers to the more standard word order pattern in MNG, namely V2. It is not obvious why not more constituents stack up in the left periphery in the MNG languages, as in e.g. Italian, under the rich CP approach (Rizzi 1997). The analysis we propose in this paper is similar to the approaches mentioned above with respect to the locus of the complementizer, but instead of arguing for different sizes of complements of C, we argue that main and embedded clauses always have the same structural size, as illustrated in (8) with V2 and non-V2 versions of declarative and interrogative clauses:

(8) *Norwegian declaratives*

V2:	$[_{CP}$ Eva$_j]$	$[_{C^0}$ er$_i][_{IP}$ t$_j$ alltid	$[_{vP}$ t$_i$ sen.]]]
Non-V2:	at $[_{CP}$ Eva$_j]$	$[_{C^0}$ Ø$][_{IP}$ t$_j$ alltid	$[_{vP}$ er sen.]]]
	that Eva	(is) *always*	*(is) late*

(9) *Norwegian interrogative*

V2:	$[_{CP}$ Ka	$[_{C^0}$ gjør$][_{IP}$ ho alltid	$[_{vP}$ på morran?]
Non-V2:	$[_{CP}$ Ka	$[_{C^0}$ Ø$][_{IP}$ ho alltid	$[_{vP}$ gjør på morran?]]]

what *(does) she always* *(does) in the.morning*

We will for now call the top projection of the clause CP, but in principle, FinP or MoodP would be more suitable labels, especially since we leave the complementizer outside of C. In this approach, the finite verb surfaces in C in Mainland North Germanic (MNG) if it carries some specific value of Mood or (illocutionary) Force (cf. Julien 2015), but exactly what that value is may differ from dialect to dialect, as we will see later. In contrast, we assume that all finite verbs in Icelandic, and in earlier stages of the MNG languages, surface in C, i.e., C attracted finite verbs, independent of Mood/Force values. In other words, we treat Icelandic as a genuinely symmetric V2 language, see Hrafnbjargarson & Wiklund (2009) for a similar, and Vikner (1995) for discussion, and not as an embedded V-to-I language (Holmberg & Platzack (1995), Thráinsson (2010), Heycock et al. (2010) etc.). The development of the main–embedded asymmetry in MNG is thus best described as a development of a new positional mood system, possibly as a consequence of the disappearance of the old morphological mood system. In this newer system, mood is more generally linked to a higher reliance on positional cues in the modern MNG languages and lower reliance on the inflectional/morphological cues.

Our analysis will make it more straightforward to capture the instability within and between North Germanic speakers and languages with respect to V-to-C movement, as well as account for some of the problems with standard V2 analyses that are based on the complementary distribution of the complementizer and finite verb. However, our analysis cannot give a syntactic explanation of the pattern mentioned in example (5) above: (non-subject) topicalization is only available under V-to-C movement. Nothing in our analysis is currently explaining why the subject cannot stay in IP in the embedded clause structure above, leaving SpecCP available for the adverb *igår*, as in the main clause. We will argue that the problem is also present in the other modern approaches that treat the embedded V2/non-V2 distinction as a difference in syntactic size of the embedded clause. In IV.4.3, we will argue that topicalization in non-V2 is not necessarily syntactically restricted, and that the restrictions found are better explained in terms of text cohesion/sentence binding than as clause-internal syntactic structure.

The structure of this paper is as follows: First we discuss verb placement in North Germanic main and embedded clauses. We then review classical, and more recent approaches to (embedded) V2 in Section IV.3. Section IV.4 discusses clause-internal and clause-external syntactic properties of V2 and non-V2 embedded clauses and show how the different accounts, including our own, deal with these. In the second half of this paper, we provide new empirical data from North Germanic, showing patterns of unstable verb placement that are not easily captured in a standard V2 analysis. We focus on two cases of unstable verb placement: cases of V-to-C when we expect V-in-situ in embedded clauses in Faroese (Section IV.5.1), and V-in-situ where we expect V-to-C in Norwegian main clauses (Section IV.5.2). Section IV.6 concludes the paper.

IV.2 Verb placement in North Germanic

The North Germanic languages Danish, Faroese, Icelandic, Norwegian and Swedish all have a basic SVO word order (10-a) and declarative main clauses are typically Verb Second (V2). Objects and adverbials can occur in first position, and in these cases, the

subject has to surface after the finite verb (see (10-b)). The subject cannot surface in its typical pre-verbal position in these cases, due to the V2 grammar (10-c).

(10) *Norwegian*

a. Charlotte har strikket den der genseren.
Charlotte has knitted that there jumper.DEF
'Charlotte has knitted that jumper.'

b. Den der genseren har Charlotte strikket.
that there the.jumper has Charlotte knitted
'Charlotte has knitted that jumper.'

c. *Den der genseren Charlotte har strikket.
that there the.jumper Charlotte has knitted

The verb is assumed to be in a high clause position in (10-b); the verb is placed in a position above the subject, which is located in IP. The verb is in a high position in subject initial clauses as well, as seen by the fact the verb precedes sentence adverbs and other adverbials (see (11)). We take these adverbs to be located inside the IP (or possibly at the edge of vP) , so that if the verb is to the left sentence adverbials, it must have moved out of vP.

(11) Charlotte har ikke strikket vottene.
Charlotte has not knitted the.mittens
'Charlotte has not knitted the mittens.'

As already shown in the introduction (example (7)), the finite verb may remain low in main clause *wh*-questions in Norwegian dialects. Another clause type where we find variation in verb placement in North Germanic main clauses are imperatives (see (12); Platzack & Rosengren 1997, Garbacz & Johannessen 2014).

(12) *Norwegian*

a. Dra ikke!
go.IMP not

b. Ikke dra!
not go.IMP
'Do not go!'

(13) *Swedish*

a. Kom inte hit!
com.IMP not here

b. *Inte kom hit!
not come.IMP here
'Do not come here!'

Typically, imperatives in North Germanic have V1 word order. In Swedish and Danish the negative adverb follows the verb (as in (13)). In Norwegian, the verb may either follow or precede negation.[2]. We assume that the verb is in the typical V2 postion in

[2]Faroese and Icelandic have two types of imperatives, one form with the inflected imperative form and one with the infinitive form. In both these languages, the inflected imperative form must precede negation (as in the Swedish example above), whereas the infinitive verb used as an imperative follows the negation (NEG > V_{inf}) (Garbacz & Johannessen 2014: 251)

(12-a) and (13-a), and the typical vP-internal position in (12-b).

In embedded clauses in the Mainland North Germanic (MNG) languages (i.e., Danish, Norwegian and Swedish) the finite verb typically follows negation and sentence-medial adverbs:

(14) Dette er filmen som Ine (*har) ikke (har) sett.
this is the.film that Ine (has) not (*has) seen
'This is the film that Ine has not seen.' [*Norwegian*]

Embedded relative clauses are robustly non-V2 in Mainland North Germanic. However, as is by now well known, high placement of the verb is possible in a restricted set of complement clauses, as in (15).

(15) Bror sier at Charlotte (strikker) alltid (strikker) i lunsjen.
Bror says that Charlotte knits always knits in the.lunch
'Bror says that Charlotte always knits in the lunch break.' [*Norwegian*]

Since the seminal work of Hooper & Thompson (1973), many researchers have pursued the insight that main clause word order in embedded clauses is licensed only when the embedded clause is asserted. Exactly what unifies the contexts that allow for embedded V2 (EV2) is much disputed, and different operationalisations of this exact 'assertion' have been proposed (see e.g., Simons 2007, Wiklund et al. 2009, Julien 2007, Jensen & Christensen 2013). Simons (2007) proposes that the crucial notion of assertion is whether the embedded clause contributes a proposition that makes the utterance relevant, and names this 'Main Point of Utterance' (MPU) (Simons 2007: 1035–6). Wiklund et al. (2009), following Simons (2007), claim that there is an indirect relation between MPU and EV2 in North Germanic, where both are licensed by a ForceP that can only be selected by a subset of verbs: namely assertives and semifactives. However, Wiklund et al. (2009) conclude that MPU and V2 are both optional and independent properties of ForceP, and may occur independently of each other. Jensen & Christensen (2013) and Julien (2007, 2015, 2020) assume a more direct link between assertion and V2 where the possibility of EV2 follows from whether or not the embedded clause is the 'foreground' (Jensen & Christensen 2013) or has 'speech act potential' (Julien 2020). Julien (2015, 2020) explicitly ties the syntax and semantics of V2 together and argues that the syntactic Force head is responsible both for the illocutionary force as well as for V2 order. For Julien, Force and V2 are inextricably linked, and this analysis is extended to main clause V2 in Mainland North Germanic as well.

Djärv et al. (2017) empirically test the interaction of Main Point of Utterance and EV2 under various assertive, and non-assertive predicates and find no interaction between the effect of embedded V2 and embedded MPU, thus supporting the cautious, unidirectional link between the two as proposed by Wiklund et al. 2009). Furthermore, Djärv et al. show that even when embedded V2 (EV2) is possible, it is never obligatory. Overall, they find that Swedish speakers have a preference for the verb to stay *in situ* in all embedded clauses (Djärv et al. 2017: 24).

On the basis of the above patterns in Mainland North Germanic main and embedded clauses, we can imagine a verb placement system for these languages based on the interplay of (some notion of) assertion and the main–embedded distinction that can be summarised as in Table 1 (for more discussion of such a system see Westendorp 2021a).[3] Note that we here describe the Mainland North Germanic system as a whole,

[3]This paper is not concerned with finding the correct way to define the exact notion of

we do not suggest that it is necessarily the case that there is variation in verb placement for all varieties or within speakers.

Table IV.1: Interaction of ±main and ±assertive for the verb placement in Mainland North Germanic.

	+ ASSERTIVE	- ASSERTIVE
+ MAIN	**V2 order**	variable word order
	(declaratives)	(*wh*-questions, imperatives)
- MAIN	variable word order	**non-V2 word order**
	(assertive verb complements)	(embedded quest., relative clauses)

As described in Table 1, there is stable V2 word order in asserted main clauses, and stable non-V2 word order in non-asserted embedded clauses. In the other types of clauses, i.e., (+main, -assertive) and (-main, + assertive), we find variation. However, a truly bidirectional link between assertion and V2, or even illocutionary force and V2, such as Julien (2015, 2020) makes, is not likely. Surely, the Norwegian *wh*-questions (see (7)) and imperatives (see (12)) have the same illocutionary force, independently of the word order they are produced with. An analysis as proposed by Julien, where the illocutionary force and the V2 word order are consequences of the presence of the same Force head is thus unlikely to be the correct characterisation of the MNG system. Yet, within the pockets of unstable verb placement that we describe, it may well be the case that the more asserted the embedded clauses is, the more compatible it is with V2 (following Wiklund et al.'s (2009) 'assertion hypothesis'). Furthermore, the notion of Speech Act Potentials (SAP), as used by Julien (2020), based on work by Krifka (2001, 2014), is very likely to be the correct semantic-pragmatic notion that affects verb placement in the MNG languages, but Speech Act Potentials cannot be the only factor governing verb placement, as we can conclude from the variable verb placement in imperatives and questions.

The system described in Table 1 cannot handle all varieties of North Germanic. In modern Icelandic embedded clauses, the finite verb typically precedes negation and sentence-medial adverbs (see (16); cf., (14)). This is also the default word order found in earlier stages of Mainland North Germanic.

(16) Đetta er myndin sem Ása (hefur) ekki (*hefur) sáð.
this is the.film that Ása (has) not (*has) seen
'This is the film that Ása has not seen.' [*Icelandic*]

Modern Icelandic is part of a group of so-called 'general' embedded V2 languages (Vikner 1995): languages that display V2 in main and embedded clauses (with a complementizer) without any restriction on the matrix verb, see (17). Yiddish and earlier stages of North Germanic are also part of this group.[4] The (modern) Mainland North Germanic languages by contrast are 'limited' embedded V2 languages (Vikner 1995).

´assertion' or illocutionary force which best captures the correct environments that allow V2, in stead we use 'assertion' here as a placeholder term.

[4]Modern Spoken Afrikaans is seemingly developing into a language that allows V2 in both main and (a wide range of) embedded clauses too, see Biberauer (2002).

(17) *Icelandic*

a. Jón **vildi** ekki gefa Haraldi bókina.
Jon.NOM wanted not to.give Harald.DAT book.ACC
'Jon didn't want to give the book to Harald.'

b. Ása sagði að Jón **vildi** ekki gefa Haraldi bókina.
Ása said that Jon.NOM wanted not to.give Harald.DAT book.ACC
'Ása said that Jon didn't want to give the book to Harald.'

c. Ása spurði hvort Jón **vildi** ekki gefa Haraldi bókina.
Ása asked whether Jon.NOM wanted not to.give Harald.DAT book.ACC
'Ása asked whether Jon didn't want to give the book to Harald.'

This split in the default embedded word order patterns between Icelandic and Mainland North Germanic is usually explained as a difference in the availability of independent V-to-I movement. Such movement has been claimed to be licit in Icelandic, but in MNG this movement was lost some 300 years ago (Falk 1993: 155f, Vikner 1995: 151, Sundquist 2003). The (im)possibility for the Icelandic V2 system has been connected to the 'richness' of the inflectional system (i.e, the Rich Agreement Hypothesis; see e.g., Kosmeijer 1986, Roberts 1985, Platzack & Holmberg 1989, and recently Koeneman & Zeijlstra 2014). Many accounts of Icelandic and earlier stages of MNG assume that there in fact is two positions for the finite verb in these languages: C and I (see e.g., Travis 1984 and Holmberg 1986). In subject-initial embedded clauses, relative clauses and embedded questions, the verb is assumed to be in I. In embedded clauses with a topicalised element, the verb is assumed to be in C, just as in main clauses. Earlier accounts of Icelandic word order assumed more symmetrical analyses for main and embedded clauses (e.g., Rögnvaldsson & Thráinsson (1990), Maling (1980) etc.). Our analysis of the MNG languages easily carries over to Icelandic; we assume that there are two positions for the verb in Icelandic, C and v, with the difference that the verb always surfaces in C when finite, and usually in v when non-finite (see Thráinsson (1993), Vangsnes (2002) for discussion of non-finite verbs surfacing in a high position in Icelandic).

Until now, we have not mentioned the fifth language in the North Germanic family, namely Faroese. The status of embedded verb placement in present-day Faroese is much debated. Though the language is often grouped with Icelandic (together forming the 'Insular' North Germanic group), Faroese has been undergoing a change from a system like Icelandic to a embedded verb placement system similar to that of the Mainland North Germanic languages where both Verb > Adverb and Adverb > Verb are possible, at least in certain contexts (see (18); e.g., Jonas 1996; Thráinsson 2003; Heycock et al. 2010, 2012).

(18) Hjalmar segði at Annika (bindur) altíð (bindur) í miðmálan.
Hjalmar says that Annika (knits) always (knits) in the.lunch
'Hjalmar says that Annika always knits in the lunch break.' [*Faroese*]

We will present new empirical data on the verb placement variation in Faroese and MNG embedded clauses in Section IV.5.1 and further discuss the licensing of this order there.

Now, we turn to theories of Verb Second. In the next sections, we review 'classical' Den Besten-style analyses of Verb Second, as well as the expanded-CP approaches to V2 mentioned in the introduction to this paper (i.e., Julien (2015, 2020), Nyvad et

al. (2017). We then discuss how these analyses (fail to) handle the verb placement patterns and other syntactic reflexes of (embedded) V2 order in North Germanic and argue for how our alternative proposal can better account for these observations.

IV.3 Theories of Verb Second

In the previous sections, we have already seen many examples of (variation in) verb placement in North Germanic. This section connects these patterns to various syntactic analyses of V2. We will talk about two core types of analyses: one in which embedded V2 is unavailable due to the presence of a complementizer in the V2 position (C; Den Besten 1983, Holmberg & Platzack 1995: ch.3), and one in which the complementizer selects for a complement that is smaller than a main clause C (or Force). We will discuss both types of proposals in this section before moving on to how these accounts handle various syntactic patterns in North Germanic.

IV.3.1 V2 as V-to-C movement

Verb Second (V2) features in most Germanic languages, with the notable exception of Modern English. It entails that the finite verb in main clauses is in clause-second position following some clause-initial phrasal constituent. The nature of this first constituent is not restricted in any particular way, see (19) (Holmberg 2015).

(19) *Dutch*

a. Sofie **stuurde** vorige week een kaartje uit Griekenland.
Sofie sent last week a postcard from Greece

b. Vorige week **stuurde** Sofie een kaartje uit Griekenland.
last week sent Sofie a postcard from Greece

c. Een kaartje **stuurde** Sofie vorige week uit Griekenland.
a postcard sent Sofie last week from Greece

d. Wat **stuurde** Sofie vorige week uit Griekenland?
what sent Sofie last week from Greece

Theories of the V2 phenomenon go back to seminal work by Koster(1975) and Den Besten (1983) who analyse the phenomenon as consisting of two obligatory movements:

1. Movement of the finite verb to the C position, and
2. movement of some phrasal constituent to the specifier of this C.

This type of analysis of V2 as V-to-C movement has become know as the 'Classical' Theory. Much of this classical analysis is based on the observation that complementizers and verb movement are in complimentary distribution in Dutch (and German), see (20).

(20) *Dutch*

a. Morgen **viert** Floor haar verjaardag.
tomorrow celebrate Floor her birthday
'Floor is celebrating her birthday tomorrow.'

b. Anne zegt [dat Floor morgen haar verjaardag **viert**.]
Anne says that Floor tomorrow her birthday celebrate
'Anne says that Floor is celebrating her birthday tomorrow.'

In order words, the main assumption is that the position that is reserved for the finite verb in main clauses, is filled by the complementizer C in the embedded clause. Because of this generalisation, Den Besten proposes that raising of the verb is blocked by the presence of the complementizer in embedded clauses (1983: 55); the complementizer and finite verb compete for the same position in COMP (i.e., C^0 in post-Den Besten theories). In the absence of a complementizer in main clauses, the finite verb must move up the clause from its VP-internal base position to C. In accordance with X-bar theory, V2 is the double verb movement from VP to I to C (Chomsky 1986).

The classical account of V2 as V-to(-I-to)-C movement has been updated into later developments of linguistic theory, most notably in theories of a more articulated left periphery (Rizzi 1997, Cinque 1999) which has opened up for V2-related movement and merger to target a range of different projections within the left periphery.

IV.3.2 Accounting for verb movement in the presence of a complementizer

In Den Besten-style analyses of V2, the possibilities and impossibilities of V2 verb movement are accounted for by two assumptions: (i) V2 is movement to C, and (ii) all clauses have exactly one C. Following these assumptions one would not expect to find V2 co-occurring with an overt complementizer (or lack of a complementizer without verb movement).

This is indeed the case for languages such as Dutch and German, which have therefore been called 'well behaved' V2 languages in the literature (Vikner 1995). As we have shown in Section IV.2, the Mainland North Germanic (MNG) languages also show this main–embedded asymmetry. However, V-to-C movement in embedded clauses is also possible, and crucially, the complementizer is obligatory in these sentences:

(21) Han sa [att Johan **borde** inte ha gett Maria boken.]
he said that Johan should not have given Maria the.book
'(He said that) Johan should not have given Maria the book.' [*Swedish*]

To account for the observation that V2 co-occurs with a overt complementizer, one of the assumptions of the classical theory of V2, i.e., V2 is V-to-C/only one C, must be abandoned. Either we can append additional CP's on top of the original CP, or assume that embedded V2 and V-in-situ clauses have different structures. Examples of analyses that assume a recursive CP, are e.g., De Haan & Weerman (1986), Holmberg (1986), Platzack (1986), Holmberg & Platzack (1995) and Vikner (1995). These analyses have a further advantage of being able to account for the observation that several complementizers can occur in a recursive manner in some V2 languages.[5]

A more recent strand of analyses of V2, in contrast to the 'Classical' analyses, assume that complementizers and verbs do not target the same position. Instead, a complementizer selects a clause structure of a certain size. We will below focus on two explicit proposals of embedded V2 in Mainland North Germanic: Julien (2015, 2020) and Nyvad et al. (2017).

[5] Another related strain of analyses assume topicalization to specIP in embedded V2 sentences: see discussion in Vikner (1995: ch.4) for a comparison between recursive c and SpecIP analyses.

Julien (2015), building on Eide's 2011 approach to the MNG C-domain, presents an expanded CP-structure which consists of the projections Top(ic), Force and Fin. Julien closely connects V2 order to illocutionary force, and in her analysis the Force head is present in all Mainland North Germanic V2 clauses and attracts the finite verb, and is at the same time responsible for the illocutionary force of the clause (see (22)). The Force head contains an unvalued feature (possibly finiteness) that can be valued by the finite verb. In addition, Force has an EPP-feature, which triggers movement of some phrasal constituent to SpecForceP (Julien 2020: 278). The Force head can be further dominated by a Topic head, that hosts topicalised elements in the specifier, possibly including subject. [6] When a V2 clause is embedded the complementizer is in a Subj(unction)-projection outside of this C-domain. In this way, the complementizer is purely a marker of subordination (see also Julien (2020: 277). Non-V2 clauses lack an articulated C-domain with a Force head to attract the finite verb. In these clauses, only FinP is available (see (23)).

(22) $[_{\text{Subj}}$ att$]$ $[_{\text{TopP}}$ Johan$_j$ $[_{\text{Top}}\ ]$ $[_{\text{ForceP}}$ $[_{\text{Force}}$ borde$_i]$ $[_{\text{FinP}}$ t$_j$ $[_{\text{Fin}}$ t$_i]$ $[_{\text{vP}}$ ...]

(23) $[_{\text{Subj}}$ att$]$ $[_{\text{FinP}}$ Johan $[_{\text{Fin}}\ ]$ $[_{\text{vP}}$ borde ...]

Even though V2 order is not possible without a Force head, Julien (2015: 149) provides examples that the Force may be licensed in other ways in Mainland North Germanic. It is thus possible to have illocutionary force without having V2 order in MNG as long as the Force head is identified by some other element (see also Wiklund et al. (2009).

A central part of Julien's account is the observation that word order in the embedded clause affects the possibility of 'indexical shift', i.e., the interpretation of deictic pronouns. We show this in the examples from Julien (2015) below. In regular, non-V2, embedded clauses (24-a), the pronoun *du* 'you' must refer to the addressee in the current speech situation. In the V2-clause in (24-b) there are two interpretations possible of the pronoun: either it refers to the addressee in the speech situation, or it refers to the addressee in the speech situation that is described by the matrix verb.

(24) *Norwegian*, Julien (2015: 140)

a. Ho sa til meg at du ikkje har gjort dette aleine.
she said to me that you not have done this alone

b. Ho sa til meg at du har ikkje gjort dette aleine.
she said to me that you have not done this alone
'She said to me that you haven't done this on your own.'

One important point here is that the embedded V2 sentence is ambiguous: the pronoun can get a shifted interpretation, but it does not have to, and usually it does not. ForceP is thus underspecified with respect to this feature, which is something we will return to.

A similar analysis has been proposed by Nyvad et al. (2017) (see also Vikner 2017), although the labels for the C-projections are different. Nyvad et al. propose that the complementizer occurs in a functional projection called cP (pronounced 'little' c, similar to 'little v'), while finite verbs in main and embedded V2 clauses surface in C ('big C'). A complementizer c can either select for a big CP, resulting in embedded V2 (as in (25)), or an IP (see (26)), resulting in an regular embedded clause structure.

[6] Note that in Julien's analysis, the Force head is not the highest head of the C-domain, contrary to the proposal in (Rizzi 1997).

(25) $[_{\text{cP}}\ [_{c^0}\ \text{att}]\ [_{\text{CP}}\ \text{Johan}_j\ [_{C^0}\ \text{borde}]\ [_{\text{IP}}\ \ldots$

(26) $[_{\text{cP}}\ [_{c^0}\ \text{att}]\ [_{\text{IP}}\ \text{Johan}_j\ [_{I^0}\ \text{inte borde}\ \ldots$

This analysis has the advantage of earlier CP-recursion analyses that it can also account for the co-occurrence of several complementizers in a row (see e.g., Vikner (1991) for examples from Danish, Hoekstra (1993) for Dutch). Now, this leads up to the core question: is there any syntactic evidence supporting the idea of a richer structure in embedded V2 clauses compared to regular clauses? More specifically, can the enriched CP structures explain the robust generalisation that topicalization is dependent on V2? We provided the following example in the introduction (example (5)):

(27) *Swedish*

a. Johan sa att igår kom Ida inte for sent till skolan.
Johan said that yesterday came Ida not too late to the.school
'Johan said that Ida didn't come late for school yesterday.'

b. *Johan sa att igår Ida (inte) kom for sent till skolan.
Johan said that yesterday Ida (not) came too late to the.school

Nyvad et al. (2017) argue that several cP's can stack on top each other, and given several available specifiers in the left periphery, we would expect it to be possible to fill one of these with a fronted (non-subject) element. However, this is not possible, and Nyvad et al. states that only 'big' CP can host a topicalised phrase. This has to be stipulated in their account and does not directly fall out from their general distinction between small c and big C. Julien (2015, 2020) offers a more elaborate story in which topicalization is semantically dependent on a projection that expresses illucutionary force, namely ForceP. We will argue however that it is unlikely that the core cases of fronting in North Germanic have anything to do with a semantic/pragmatic notion of selecting a topic for a subsequent clause.

Our proposal shares the key feature from Julien and Nyvad et al. that the complementizer occupies a different projection than the main verb, i.e., a position that is outside of the classical main clause spine. In contrast to the other two proposals, and more in accordance with earlier accounts of V2, we take the clausal structure to be identical in main and embedded clauses: the only difference is whether the verb surfaces in C (most main clauses) or in v (most embedded clauses).

IV.4 Explaining asymmetries in fronting

The extensions and revisions of the classical V2-theory since Den Besten (1983) allow us to account for the co-occurrence of verb movement and an overt complementizer. But despite this progress, many observed main–embedded or V2 – non-V2 symmetries within the North Germanic languages (such as the (im)possibility of topicalization discussed briefly above), as well as differences within and between these languages, rarely fall out if these proposals and instead have to be stipulated. In this section, we will discuss several of these patterns, how the accounts by Julien (2015) and Nyvad et al. (2017) attempt to explain these data, and our proposal for a different analysis. We will first focus on the internal structure of V2 and non-V2 clauses, and especially *where* we expect to find structural differences between the two clause types, namely in the CP and to some extent the IP. We will discuss the syntactic properties of the subject and the clause initial elements. To give a very simplified overview, there are

essentially three types of clause-initial elements (here we assume that complementizers are clause-external rather than clause initial):

1. Subjects: pronominal and phrasal subjects appear in the unmarked case in the first position. This is true in both embedded clauses and main clauses.
2. *Wh*-elements: if a clause contains a *wh*-element, the *wh*-element must occur in first position (with some well-known exceptions). This is true in both main and embedded clauses. Questions without overt *wh*-elements, i.e. *yes/no*-questions, behave like *wh*-questions, and can be assumed to host a null operator in first position.
3. Adverbials and objects: the by far most common non-subject, non-*wh* type of fronting is sentence initial text binding adverbials (e.g., *så*, *då* 'so') or frame-setting adverbials. More rarely, objects can be fronted, but this often adds a contrastive interpretation of the object. Fronting of adverbials and objects is usually optional and has a stylistic effect, and is only available in V2-clauses.

In the following three subsections, we will look at the main/embedded (a)symmetry for the three types of clause initial elements.

IV.4.1 Subject placement asymmetries

The following section focuses on data from Swedish and Norwegian, which show slightly different subject placement patterns than the other North Germanic languages. It has sometimes been assumed that the distribution of subjects in Mainland North Germanic is similar in embedded contexts and non-subject initial main clauses (see e.g. Nilsen 1997, Svenonius 2002), but corpus studies and grammatically judgement studies have shown that this is not necessarily the case.

In both Swedish and Norwegian main clauses, inverted phrasal subjects often appear after high IP adverbs, such as negation and various speaker- or speech act related adverbs. In embedded *that*-clauses, the subject appears before such adverbs. We present the results from two acceptability judgement studies that compare the placement preferences in main and embedded clauses in Table 2.

Table IV.2: Mean judgement of full DP subjects in embedded and main clauses in Norwegian (N = 43) and Swedish (N = 17) on scale from 1–6.

	Norwegian Anderssen et al. (2018)		**Swedish** Westendorp & Lundquist (2019)	
	shifted SUBJ > NEG	unshifted NEG > SUBJ	shifted SUBJ > NEG	unshifted NEG > SUBJ
main clause	3.2	5.9	5.37	5.57
emb. clause	5.8	**2.6**	5.47	**2.54**

Anderssen et al. (2018) show that in Norwegian, post-adverb placement of the subject is a clear preference in main clauses (see (28); see also Westergaard 2011). For Swedish, Westendorp & Lundquist (2019) find that the order is more variable, with

only a small preference for NEG >DP order (as in (29); see also Andreasson 2007 and Larsson & Lundquist *in press*).[7]

(28) *Norwegian*, from Anderssen et al. (2018)

a. Derfor kjøper ikke Tor cola så ofte. [unshifted]
therefore buys not Tor cola so often

b. ??Derfor kjøper Tor ikke cola så ofte. [shifted]
therefore buys Tor not cola so often
'That is the reason Tor does not buy coke so often.'

(29) *Swedish*, from Westendorp & Lundquist (2019)

a. Tyvärr kom inte Nils i tid. [unshifted]
unfortunately came not Nils in time

b. Tyvärr kom Nils inte i tid. [shifted]
unfortunately came Nils not in time
'Unfortunately, Nils did not come on time.'

In embedded *that*-clauses, the preferences are reversed for both languages: post-adverbial subjects are usually perceived as marked, if not ungrammatical, and pre-adverbial subjects always unmarked:

(30) *Norwegian*, from Anderssen et al. (2018)

a. ??Han trodde at ikke Siri ville like den. [unshifted]
he thought that not Siri would like it

b. Han trodde at Siri ikke ville like den. [shifted]
he thought that Siri not would like it
'He thought that Siri would not like it.'

(31) *Swedish*, from Westendorp & Lundquist (2019)

a. ??Hon visste att inte Nils skulle hinna det. [unshifted]
she knew that not Nils would make it

b. Hon visste att Nils inte skulle hinna det. [shifted]
she knew that Nils not would make it
'She knew that Nils would not have time.'

In embedded *that*-clauses, the preferences are reversed for both languages: post-adverbial subjects are usually perceived as marked, if not ungrammatical, and pre-adverbial subjects always unmarked:

(32) *Norwegian*, from Anderssen et al. (2018)

[7] The preference for NEG >DP in Swedish is strongest with light speech act adverbs/particles like *ju*, *väl* and *nog*.

(i) *Swedish*

a. Klockan 8 hade ju Kalle redan gått hem.
at 8:00 had you.know Kalle already gone home
'Kalle had of course already left by 8 o'clock.'

b. (?)Klockan 8 hade Kalle ju redan gått hem.
at 8:00 had Kalle you.know already gone home

a. ??Han trodde at ikke Siri ville like den. [unshifted]
he thought that not Siri would like it

b. Han trodde at Siri ikke ville like den. [shifted]
he thought that Siri not would like it
'He thought that Siri would not like it.'

(33) *Swedish*, from Westendorp & Lundquist (2019)

a. ??Hon visste att inte Nils skulle hinna det. [unshifted]
she knew that not Nils would make it

b. Hon visste att Nils inte skulle hinna det. [shifted]
she knew that Nils not would make it
'She knew that Nils would not have time.'

As far as we are aware, no satisfying account for this difference in placement of inverted subjects has been given. In a Den Besten-style account, the post-verbal subject in the main clause should appear in the same position as the post-complementizer subject in the embedded clause, i.e., in SpecIP. The proposal in Nyvad et al. (2017) makes exactly the same predictions; the complement of 'small' c in regular embedded clauses, is identical to complement of 'big' C in main clauses and embedded V2. Similarly, in Julien's (2015) account, the projection 'Subj' and Force select the same complement, namely FinP. As we can tell, none of these proposals explain why subjects almost without exception are the first constituent of an embedded clause, while they tend to be preceded by adverbs in main clauses.

In our account of North Germanic *that*-clauses, we assume that subject-initial declarative main clauses are structurally identical to embedded clauses, i.e., a structure where the subject surfaces in the highest specifier (for now, SpecCP). Subjects should therefore surface before sentence adverbs.[8]

(34) *Norwegian*

a. De sa at $[_{CP}$ Jon $[_{IP}$ ikke $[_{vP}$ kom til skolen i går]]].
they said that Jon not came to the.school yesterday.
'They said that Jon did not come to school yesterday.'

b. $[_{CP}$ I går kom $[_{IP}$ ikke Jon $[_{vP}$ til skolen.]]]
yesterday come not Jon to the.school
'Yesterday, Jon didn't come to school.'

IV.4.2 *Wh*-initial clauses: complementizers and subject placement

Another problem for Classical/V-to-C theories of V2 is that many types of embedded clauses lack an overt complementizer 'head'. Instead the C element is rather a phrase (35-a), typically assumed to be located in SpecCP, i.e., the same position as fronted elements in main clauses (35-b):

[8] There are indeed cases where a sentence adverb appears in the first position of an embedded clause, see especially Lindstad (2007: 104) and Garbacz (2014) for discussion and examples. In some cases, these are clear cases of constituent modification (e.g., 'He said the not all students were late.'), but other cases are less straightforward. One possibility is that there are some rare cases of narrative inversion possible in embedded clauses, similar as in main clauses, see Mörnsjö (2002) and Sigurðsson (1990). Another possibility is that the negation is indeed in the clause initial position, i.e. SpecCP.

(35) *Swedish*

a. Hon frågade [$_{CP}$ [varför [$_{C^0}$ ∅] [$_{IP}$ Eva inte [$_{vP}$ hade gjort läxan.]]]
she asked why Eva not had done the.homework
'She wanted to know why Eva had not done her homework.'

b. [$_{CP}$ [Varför [$_{C^0}$ hade$_i$] [$_{IP}$ Eva inte [$_{vP}$ t$_i$ gjort läxan?]]]
why had Eva not done the.homework
'Why had Eva not done her homework?'

Cross-linguistically, it is common that embedded clauses with overt CP-specifiers lack a complementizer, a phenomenon usually referred to as the 'doubly-filled COMP filter' (Chomsky & Lasnik (1977); e.g., Platzack (1986), Holmberg (1986). In the Den Besten approach to V2, the doubly-filled COMP filter is problematic: the filter often holds in embedded clauses, but never in main clauses, where C and SpecCP both are assumed to be filled. As illustrated in (35-a), we assume that the *wh*-element appears in SpecCP, and that the head of C is empty in embedded questions, just as in embedded declaratives. It is an open question if there is an empty complementizer above the *wh*-phrase. One possibility is that there is a projection above CP in these structures, similar to Julien's (2015) SubjP, and Nyvad et al.'s (2017) cP. We could assume that the preposition/complementizer *om* could head such a position, both in embedded *yes/no*-questions, and embedded *wh*-question, where *om* sometimes optionally appears (35-c).

(36) *Swedish*

a. Han frågade om [$_{CP}$ OP [$_{IP}$ Eva [$_{vP}$ hade gjort läxan]]].
he asked whether OP Eva had done the.homework
'He asked whether Eva had done the homework.'

b. [$_{CP}$ OP Hade [$_{IP}$ Eva [$_{vP}$ gjort läxan?]
OP had Eva done the.homework
'Had Eva done the homework?'

c. Han frågade (om) [$_{CP}$ varför [$_{IP}$ Eva hade gjort läxan.]]
he asked (whether) why Eva had done the.homework
'He asked why Eva had done the homework.'

Under such an analysis, subjects would appear in the same position in embedded questions and main clause questions; SpecCP is in both cases filled with a *wh*-element or an operator, which forces the subject to surface in IP. We thus predict that sentence adverbs should be equally likely to surface before subjects in embedded and main clause questions. We believe that this is correct; in embedded questions, high sentence adverbs may appear both before and after subjects, as exemplified in Norwegian in (37-a-b) and Swedish (37-c):

(37) a. Jon spurte [$_{CP}$ hvorfor [$_{IP}$ (ikke) Mari (ikke) [$_{vP}$ kom på festen.]]]
Jon asked why (not) Mari (not) come to the.party
'Jon asked why Mari did not come to the party.'

b. Jon spurte om [$_{CP}$ OP [$_{IP}$ (ikke) Mari (ikke) [$_{vP}$ likte fisk.]]]
Jon asked whether (not) Mari (not) liked fish
'Jon asked if Mari did not like fish.'

c. Johan ville veta [$_{CP}$ vilka böcker [$_{IP}$ (inte) Maria (inte) [$_{vP}$
Johan wanted to.know which books (not) Maria (not)
hade läst.]]]
had read
'Johan wanted to know which books Maria han not read.'

A symmetric analysis for main and embedded non-subject questions in Mainland North Germanic in (37) is fairly straightforward, but subject questions pose some problems. In all the MNG languages, the relative clause marker *som* (or *der* in Danish) has to be present, directly after the subject. In contrast, an overt *som* after the subject is not licit in subject questions with V2, (38-b):

(38) *Norwegian*

a. Johan ville vite [$_{CP}$ hvilke elever$_i$ *(som) [$_{IP}$ t$_i$ ikke [$_{vP}$ kom
Johan wanted to.know which students that not came
på festen.]]]
on the.party
'Johan wanted to know which students didn't come to the party.'

b. [$_{CP}$ Hvilke elever$_i$ (*som) kom$_j$ [$_{IP}$ t$_i$ ikke [$_{vP}$ t$_j$ på festen?]]]
which students that came not on the.party
'Which students did not come to the party?'

As discussed above, some MNG dialects, allow *som* in both embedded and main clause subject questions, but only if the finite verb stays *in situ*. In other words, *som* and the finite verb seem to genuinely have complementary distribution, but only in subject questions. For now, we can assume that *som* really is a C-head (unlike *at* under our account), which is inserted as a last resort to avoid string vacuous movement of the subject from IP to CP (cf. Vangsnes 2019b).[9]

[9]The presence of the *som* in embedded non-subject *wh*-clauses varies between the North Germanic languages: in Swedish it is optional (see (i-a)), but in the other languages and varieties it is obligatory (or at least marked to leave out), as in (ii-a).

(i) *Swedish*

a. Johan ville veta vilka böcker (som) Anne inte hade läst.
Johan wanted to.know which books that Anne not had read
'Johan wanted to know which books Anne hadn't read.'

b. Vilka böker (*som) hade Anne inte läst?
which books that had Anne not read
'Which books had Anna not read?'

(ii) *Norwegian*

a. Johan ville vite hvilke bøker (*som) Anne ikke hadde lest.
Johan wanted to.know which books that Anne not had read
'Johan wanted to know which books Anne hadn't read.'

b. Hvilke bøker (*som) hadde Anne ikke lest?
which books that had Anne not read
'Which books had Anna not read?'

It is not impossible that *som* has quite different structural properties in the North Germanic languages. We will not provide an analysis of *som* in embedded questions or in regular relative clauses in this article.

If we wish to apply this analysis to all North Germanic languages, we run into more problems with Icelandic. First, embedded subject questions license stylistic fronting, which suggests that the syntactic subject is genuinely absent from the embedded clause (e.g., Maling 1980, Jónsson 1991, Holmberg 2005, Angantýsson 2017). In contrast, main clause subject questions never license stylistic fronting , compare (39-a) with an optionally fronted participle in an embedded subject question (example from Jóhannes Gísli Jónsson, p.c.), and the corresponding main clause, without stylistic fronting (39-b).[10]

(39) *Icelandic*

a. Hann vildi fá að vita hvaða nemendur **keypt** hefðu bækurnar.
he wanted get COMP know which students bought had the.books
'He wanted to know which students had bought the books.'

b. *Hvaða nemendur **keypt** hefðu bækurnar?
which student bought had the.books

c. Hvaða nemendur hefðu **keypt** bækurnar?
which student had bought the.books
'Which students had bought the books?'

Another problem posed by Icelandic is the placement of the subject with respect to verbs and adverbs. If we stick to the idea that Icelandic has generalised v-to-C movement (for finite verbs), we would expect subject-verb inversion in both main and embedded non-subject questions, which is not case (example modified from Sigurðsson (1990).

(40) *Icelandic*

a. Hvað hefur Jón (ekki) skrifað?
what has John (not) written
'What has John (not) written?'

b. ... hvað Jón hefur (ekki) skrifað.
what John has (not) written
'... what John has (not) written.'

Examples like (40-b) in principle supports a V-to-I analysis for Icelandic (see a.o. Sigurðsson 1990): the *wh*-word sits in SpecCP, the subject is in SpecIP and the verb in I. However, the presence of stylistic fronting in (39-a) contra the absence of stylistic fronting in (39-b) strongly suggest that the *wh*-phrase occupies different positions in main and embedded clauses: in embedded clauses, the *wh*-word is outside the core clause, presumably in a specifier to what Julien calls Subj and Nyvad et al. call cP. Thus, the subject and the finite verb may occupy CP in both main and embedded questions. We could apply this analysis to MNG as well, but for now, we will stick to the idea that *wh*-elements are clause-internal, both in main and embedded clauses.[11]

[10] We assume with Maling (1980) and Angantýsson (2019) that stylistic fronting *is* available in main clauses, but only in clauses that genuinely lacks a subject, like impersonal passives and clauses with *weather*-verbs. The function of stylistic fronting is to fill the first position of the clause, SpecCP in our account.

[11] The question is of course why Icelandic would differ from MNG with respect to *wh*-elements in embedded questions. This assumed difference clearly weakens our simple account of the change from symmetric to asymmetric V2. We will assume that the difference we see between Icelandic and MNG also holds in relative clauses: in MNG the relative clause head

IV.4.3 Non-subject/non-*wh* fronting in main and embedded clauses

In the two preceding sections, we argued that two of the core clause types in MNG, subject-initial clauses and *wh*-initial clauses, can be given structurally identical analyses for main and embedded clauses. These clauses are always CP's, with the subject or *wh*-element in SpecCP. The difference between these two types of main and embedded clauses lies only in the surface position of the finite verb: C or v. We assume that the feature that ensures that SpecCP in main clauses also is active in embedded clauses, whatever that feature might be.

We will now tackle the clause type central to our first observation of a difference between V2 and non-V2 clauses, that is, clauses with fronted elements that are neither subjects nor *wh*-elements, but with a 'topicalised' element in the first position. As was highlighted in the introduction, topicalization patterns differ radically in V2 and non-V2 clauses: topicalization is only possible if the verb is realised in C.

Within the Germanic language family, we find very similar restrictions on topicalization in embedded clauses: topicalization is mainly possible in 'assertive' contexts. This holds independently of the particular quirks of the left periphery syntax of the individual language, e.g, independent of presence of V2 (English vs. the other Germanic languages), co-occurrence of complementizers and V-to-C movement (North Germanic vs. German and Dutch), or symmetric and asymmetric V2 (Icelandic vs. MNG) (see Hooper & Thompson 1973, Jónsson 1996, Bentzen 2014b, Julien 2020). The classic Den Besten-account could explain why topicalised elements cannot appear between the subject and the complementizer: there is no available slot for this element (i.e., SpecCP). However, this analysis did not provide a straightforward explanation for why topics could not appear outside the complementizer, i.e., in SpecCP, where we expect to find *wh*-elements and topics in both main and embedded clauses.

(41) *Swedish*

a. Han säger nu [$_{CP}$ [$_{C}$ att] [$_{IP}$ han inte [$_{vP}$ hadde gjort
he says now that he not had done
läxan igår.]]]]
the.homework yesterday
'He now says that he didn't do his homework yesterday.'

b. *Han säger nu [$_{CP}$ igår [$_{C}$ att] [$_{IP}$ han inte [$_{vP}$ hadde gjort
he says now yesterday that he not had done
läxan.]]]]
the.homework

and the relative marker could be assumed to be clause-internal. In non-subject relative clauses, the subject is in SpecCP in Icelandic, but in a lower projection in MNG (as supported by a freer ordering of subjects and adverbs in object relative clauses compared to *that*-clauses. Although this is far from the main topic of the paper, one might speculate that the presence of a morphological case system affects the likelihood of having external heads of relative clauses: Case marking of the head will be determined by both the syntactic structure of the embedded clause and the main clause, i.e., the case features present in the two clauses needs to available simultaneously at spell-out in a language like Icelandic, but not in Swedish and Norwegian. See Wood et al. 2017) for further discussion of the case matching in Icelandic. The difference between the two sets of languages may also be explained more generally in terms of obligatorily presence of subjects. Icelandic allows subjectless sentences, while MNG does not. We could assume that the "subject" in embedded subject questions and subject relative clauses is truly external in Icelandic, possibly only forming a relationship to the verb via agreement.

In Nyvad et al. (2017), it is simply stipulated that only CP ('big' CP) can host a topicalised phrase. In Julien (2020), topicalization is dependent on ForceP, building on work by Eide (2011) and Krifka (2001). Krifka (2001: 25) proposes that selecting a topic is a speech act in itself. This speech act is necessarily, followed by another subsequent speech act (e.g., an assertion or question) that is applied to this topic. However, the kind of topicalization Krifka describes does not constitute the typical type of fronting in MNG. Instead, fronted elements are typically temporal or clausal connectors, or high adverbs (often speaker oriented), which in a corresponding embedded clause will surface in the midfield or sentence finally as in the following examples.

(42) *Swedish*

a. På många sätt har det blivit enklare för mig på senare år.
on many ways has it become easier for me on later years
'In many ways, it has become easier for me in recent years.'

b. Han sa att det på många sätt har blivit enklare för honom.
he said that it on many ways has become easier for him
'He said that in many ways, it has become easier for him.'

c. *Han sa att på många sätt det har blivit enklare för honom.
he said that on many ways it has become easier for him

(43) *Swedish*

a. Nu har vi blivit bättre på att lösa svåra problem.
now have we become better on INF solve hard problems
'We have now become better at solving difficult problems.'

b. Han sa att de nu har blivit bättre på att lösa svåra
he said that they now have become better on INF solve hard
problem.
problems
'He said that we have now become better at solving difficult problems.'

c. *Han sa att nu de har blivit bättre på att lösa svåra
he said that now they have become better on INF solve hard
problem.
problems

The embedded clauses in the b-examples above seem to convey the same message as the a-clauses, and it seems unmotivated to come up with a semantic notion of 'topic' that would include the initial adverbials in the main clauses, but not the midfield adverbs in the embedded clauses (or equivalent sentences with the adverbial in sentence final position, which would also be an option). The c-examples above can be saved by placing the finite verb in the second position, but without V2, the sentences are ungrammatical, much in the same way as V2 violations in main clauses.

Based on the examples above, we conclude that the absence of non-subject/non-*wh* fronting in embedded clauses is not due to semantic constraints on what is usually called a 'topic'. Phrases are rarely fronted to create a topic-comment relationship (although these cases clearly exist); rather, adverbials are fronted, most often to create discourse cohesion (see Engdahl (1997), Sigurðsson (1990), for enlightening discussion). The correct question to ask is thus why cohesive fronting is unavailable in most types of embedded clauses. The function of cohesive fronting is to tie sentences together to a cohesive text (in the widest meaning of text, including conversation). The relationship

between two main clauses is clearly something different than the relationship between a main clause and an embedded clause. In the case of embedding, the embedded clause is directly selected by a main clause predicate or an adverbial. Relationships between main clauses are in principle semantically more open ended and contextual, and can be regulated by discourse adverbials of the sort that appear in first position.[12]

As we have argued above, we take the SpecCP to always be filled (with possible exceptions for narrative inversion, see footnote 8): the subject is the unmarked filler of SpecCP, unless *wh*-elements are present in the clause. The third type of fronting i.e., non-subject/non-*wh* fronting is only used for explicitly creating text cohesion, but it is usually optional. In embedded contexts, i.e., contexts where cohesion is already lexically or grammatically encoded, only the default subject fronting is available, unless a *wh*-element is present. This line of reasoning applies equally to the Mainland North Germanic languages, as well as to Icelandic and English: discourse cohesive fronting is ruled out when cohesion is lexically or syntactically encoded.

Still, non-subject/non-*wh* fronting still takes place in a restricted set of embedded clauses. As we have seen above, it has been firmly established in previous research (e.g., Heycock (2006), Wiklund et al. (2009), Julien (2007) that embedded V2 is licit in assertive contexts, or more generally, embedded sentences with independent speech act potentials. In a non-V2 language like English, and in a symmetric V2 language like Icelandic, fronting takes place without affecting verb placement:

(44) He said that tomorrow, he would not go to the theatre.

In the MNG languages, (non-*wh*) fronting is only found when the finite verb surfaces in C, as we have discussed. In Julien (2015) and Nyvad et al. (2017), this is explained by positing that topicalization is *syntactically* dependent on verb movement: topicalization only targets the specifier of a particular projection, TopP in Julien (2015) and CP in Nyvad et al. (2017), and these projections trigger obligatory verb movement. In our approach to MNG verb placement, the dependence of topicalization on verb movement cannot be syntactic in nature. Instead, we take both topicalization and v-to-C movement to be dependent on the same semantic feature or information structural configuration. Generalised V-to-C movement, or "generalised presence of CP", can thus not only be diagnosed by the availability of non-subject fronted in all types of embedded clauses, as topicalization is also restricted by non-syntactic factors.

IV.4.4 Other properties of regular and embedded V2 clauses

Above we have argued that the co-occurrence of V2 and topicalization in no way follows from the extra syntactic structure postulated in cartographic different approaches to V2. Nyvad et al. (2017) have to stipulate that only CP can host a topic, and Julien (2015)

[12]The more rare type of non-subject/non-wh fronting, namely fronting of a direct object, is presumably driven by similar cohesive mechanisms. For example, Nilsen (2003: 111) treats object topicalization as a "switch topic" operation: topicalization switches the toic from the current one to an already introduced referent or previous topic. This is presumably nothing you would do in a non-assertive clause, or inside the clause that is not the main point of utterance. Something similar could be said about "topicalised" clause initial subject followed by a pronoun, which also only are licensed in V2 contexts, see Eide (2011) and Julien (2015). There are cases of fronting of de-stressed object pronouns, most commonly clause-referring *det* (see Engdahl and Lindahl *in press*). This type of fronting seems to be less driven by factors relating to text cohesion, and the absence of this type of fronting in non-V2 clauses is not entirely clear under the current approach.

has to state a semantic dependence of Top(ic) on Force, which in practice seems to leads to a poor account of non-subject fronting. We have also argued that approaches that explain embedded non-V2 word order as an effect of the main clause/complementizer selecting a smaller complement, face problems with explaining subject placement in embedded clauses in Norwegian and Swedish. Still, we largely agree with the semantic descriptions of embedded V2, as presented in Julien (2015) and Wiklund et al. (2009), but we are not convinced that the semantic features need to syntacticised. Rather, we believe that the 'different size' approaches actually provide a poorer description of the syntactic structures than a simpler, more symmetric analysis. We will end this section by looking at three syntactic properties that have been claimed to co-vary with embedded V2 order, and discuss whether an extended CP explains these patterns (see Pettersson (2014) for more discussion):

1. Embedded V2-clauses require an overt complementizer;
2. Embedded V2-clauses cannot be fronted;
3. Embedded V2-clauses are syntactic islands, i.e., you cannot extract element from them.

The two rich CP approaches we have been discussing offer no direct syntactic explanation for the presence of a complementizer in embedded V2 clauses. Embedded clauses are selected by the same projections independent of verb placement: Subj in Julien (2015), cP in Nyvad et al. (2017). It is not clear why a Subj/C that selects a 'big' structure should be more likely to be overtly realised than a Subj/C that selects a small complement. We know that complementizers are obligatorily present in other contexts as well, most notably when an embedded non-V2 clause is dislocated from the selecting predicate, most notably when fronted, as in (45), but also when right-dislocated. This seems to suggest that the possibility of complementizer drop is not conditioned by the internal structure of the embedded clause, but rather by the syntactic and possibly textual relationship between the embedded clause and the selecting predicate.

(45) [*(Att) han inte **hade** varit i skolan] hörte hon först igår.
that he not had been in school heard he not.until yesterday
'He had not heard that she had not been in school before yesterday.' [*Swedish*]

As for the second property, it seems to true for V2-languages in general that embedded clauses with V2 order are not topicalizable, but non-V2 embedded clauses are (see e.g., De Haan (2001: 15–16) for Frisian, Wiklund (2010) for Swedish, Freitag & Scherf (2016: 8–11) for German, Swedish, Kashmiri). This is shown in the following example from Wiklund (2010: 87) (our brackets):

(46) *Swedish*

a. [Att hon inte **hade** gått hem] upptäckte han först igår.
that she not had gone home discover he not.until yesterday
'He did not know that she had gone home before yesterday.' [V-in-situ]

b. *[Att hon **hade** inte gått hem] upptäckte han först igår.
that she had not gone home discovered he not.until yesterday
int. 'He did not know that she had gone home before yesterday.' [V2]

The pattern is also more oriented toward the relationship between the embedded clause and the main clause, rather than the internal structure of the embedded clause.[13] Again, there is no straightforward way to give a syntactic account of this word order restriction in the accounts discussed above: the syntactic category for the embedded clause is the same in both V2 and non-V2 embedded clauses. Furthermore, Wiklund (2010) observes that as soon as a discourse element such as *nämligen* is added to a non-V2 embedded clause, topicalization of this clause is not possible either:

(47) *[Att hon nämligen **hade** gått hem] upptäckte han först igår.
that she you.see had gone home discover he not.until yesterday

It is clear from this observation that it is not necessarily the surface word order of the embedded clause that determines the external distribution of the clause. This syntactic effect arises from the semantics of the embedded clause, not its word order.

As for the final point, It is a well-known fact that embedded V2 interacts with extraction (Holmberg 1986): *wh*-extraction and long-distance topicalization is possible in non-V2 *that*-clauses, and not V2 *that*-clauses see (48).[14]

(48) *Norwegian*

a. Hva$_i$ sa han at vi ikke **skulle** gjøre t$_i$?
what said he that we not should do
'What did he say we should not do?' [V-in-situ]

b. *Hva$_i$ sa han at vi **skulle** ikke gjøre t$_i$?
what said he that we should not do

[13] Embedded V2 clauses cannot be fronted, but the distribution is probably more restricted than that. Although this has not been properly investigated, we suspect that embedded V2 sentences strictly speaking have to be the right-most element of the clause, i.e., it cannot have parts of the main clause to the right of it. Compare the Swedish sentences in (i-a) and (i-b):

(i) a. Han sa till sina förädrar redan i fjor [att han skulle aldrig flytta
he said to his parents already last year that he would never move
hemifrån].
from.home

b. ??Han sa till sina förädrar [att han skulle aldrig flytta hemifrån] redan
he said to his parents that he would never move from.home already
i fjor.
last year

This could have a prosodic rather than semantic explanation, see Roll et al. (2009) for evidence that embedded V2 clauses have prosodic properties typical of main clauses: embedded V2 clauses start a new intonation phrase. To leave material belonging to the main clause might be a dispreferred option.

[14] Recent research have shown that this pattern is not as stable as once thought, and exceptions have been found in Norwegian (see Bentzen et al. 2009 and Julien 2015). Julien gives the following Norwegian example:

(i) Hva sa ho til meg at du kunne ikkje gjøre aleine?
what said she to me that you could not do alone
'What did she say to me that you could not do alone?' [*Norwegian*]

Another interesting observation made by Julien (2015: 158), is that such extraction blocks indexical shift. That is, the pronoun *du* 'you' in (ii) can only refer to the actual addressee of the utterance, as was the case in the non-V2 clause in (i-a).

int. 'What did he say we should not do?' [V2]

A long tradition of studies of island constraints in the North Germanic languages have shown that extraction from embedded questions (see (49), (50)) and relative clauses (51) is generally available in Mainland North Germanic (see e.g., Maling & Zaenen 1982, Engdahl 1997, Lindahl 2017, Kush et al. 2018), and to the extent they are marked or limited, this is due to violable processing constraints rather than strict structural constraints.

Norwegian, Maling & Zaenen (1982):

(49) Hvem$_i$ vet du ikke om Jon så t$_i$ på kino?
who know you not if Jon saw on cinema
'Who do you not know if Jon saw at the cinema?'

Danish, Nyvad et al. (2017: 458):

(50) Hvad$_i$ ved hun hvor$_i$ man kan leje t$_i$ t$_j$?
what knows she where one kan borrow
'What does she know where you borrow?'

Swedish, Teleman et al. (1999: 424):

(51) Johan$_i$ känner jag många som skulle vilja gifta sig med t$_i$.
Johan know I many that would want marry REFL with
'I know many who would want to marry Johan.'

Here, MNG languages show a different pattern from the other Germanic languages (and most other languages). The recursive cP-system of Nyvad et al. can handle the extraction patterns fairly well: there are high specifiers that the extracted element can escape through. In principle, Julien (2015) 'Subj' can be used in the same way, as can our clause external complementizer. However, none of the approaches can easily capture why embedded V2 induces islandhood: the high specifier is equally available in embedded V2 as embedded non-V2 clauses.[15] A solution that emphasises that propositional independence of embedded V2 clauses is more plausible. We have two partly independent speech acts, i.e. the main clause and the EV2 clause, which cannot share any elements.

IV.4.5 Intermediate summary

In the discussion above we have basically reached the same conclusions as most previous researchers on MNG V2 orders: an embedded clause that is asserted and is the main point of utterance is more likely to have V2 word order than an embedded clause that is not asserted or the main point of utterance. Still, even embedded clauses that are the main point of utterance, can surface with the verb *in situ*. A clause with speech act potential is usually V2, but independent non-assertive clause types like imperatives, exclamatives and questions can surface with v-*in-situ*, despite having illocutionary force.

[15] Nyvad et al. (2017) suggest that a filled specifier in a big/lexical CP creates an island, but it's not obviously clear why a filled SpecCP as opposed to Spec-cP or SpecIP would have this effect.

In MNG, we do find some cases with relatively stable word order: V2 is the only option in embedded clauses with shifted indexicals and in embedded clauses with fronted non-subject/non-wh elements, what we have called cohesive fronting. We have argued that these two properties are not licensed by a projection that is (a) absent in non-V2 clauses and (b) present in V2 clauses. Rather, the head that directly or indirectly licenses shifted indexicals and cohesive fronting, call it C or Force, is present in non-V2 clauses as well. This idea is not new, but is as far as we understand, shared by both Julien (2015) and Wiklund et al. (2010). Non-V2 main clauses like imperatives and questions still have a C/Force head according to these accounts. The same presumably holds for sentences with a "shifted" interpretation of swear words and adverbials (see Wiklund 2010). Once we have acknowledged that presence of C/Force does not necessarily entail V2, and furthermore that V2 word order does not necessarily force the embedded clause to be interpreted as the main point of utterance (or the core assertion of the utterance), we have little reason to assume that this head is present in some embedded clauses and not others.

Topicalization is only available when the embedded clause has a certain independence from the main clause. We assume this is because the linking relationship between main and embedded clause is in the default case made fully explicit by the main clause predicate under selection, or the adverbial complementizer that selects the embedded clause. This makes cohesive fronting illicit in most cases: cohesive fronting is used as a stylistic means to relate two elements in text, and this is not available once this relationship is grammatically marked in the preceding clause/main clause. Only when the embedded clause is the main assertion of the utterance, can the lexico-grammatical cohesion marking in the main clause be overridden by cohesive marking in the embedded clause.

We assume that the notions MPU or Speech Act Potentials are graded factors. A clause can have more or less Speech Act Potential (SAP). We also believe that the typical "root clause phenomena" we have discussed (V2, topicalizations, islandhood/ban of extractions etc.), have different SAP thresholds. For example, embedded clauses with a certain asserted status may fail to be selected as another clause's topic (or fronted element), even when the embedded clause has non-V2 word order (see example (47) from Wiklund). Furthermore, embedded clauses can be V2 without having a topicalised subject or a fronted non-subject. Based on the literature reviewed above, we assume an implicational hierarchy like (52), in which indexical shifting and topicalization are only available at a high level of SAP, while root phenomena like V2 and ban on extractions kick in at a lower level.

(52) shifted indexicals → possible of cohesive fronting/topicalization → *v-*in situ* → ban on sharing constituents with main clause (no extraction) → *discourse position of main clause (fronting of embedded clause) ... → finite verb

In the next section we will return to our observation made in Section IV.2 that verb placement is variable not only in embedded clauses but also in certain main clauses in Mainland North Germanic. Any theory of North Germanic V2 must be able to account for such unstable verb placement, in both matrix and embedded clauses. First we will look at Faroese. Faroese had until relatively recently a V2 system that looks like modern Icelandic, i.e., a system where the verb always surfaces in C when it is finite. We believe that this has gradually been lost, and a more mood-oriented system has developed, similar to the system in MNG, where clause independence and type of illocutionary force (assertion contra questions and exclamatives) are the key factors

that regulate verb movement.

IV.5 Unstable verb placement in main and embedded clauses

We will now present data from Faroese embedded clauses where we find instances of V-to-C when we expect V-in-situ, and from the Sogn dialect of Norwegian where we find V-in-situ in main clauses where one would expect V-to-C. We will show that there is considerable variation within, as well as between speakers and varieties.

IV.5.1 Embedded V2 in Faroese

We present data from Faroese below from two experiments with different methodologies: an elicited production task and an acceptability judgement task. The elicited production paradigm was designed to test the placement of the embedded finite verb with respect to different sentence-medial adverbs in three different clause types: assertive, factive and interrogative embedded clauses. In the acceptability judgement task, we tested the same embedded constructions and the possibilities for verb movement, and additionally tested the interaction of verb movement and extraction.

Faroese has historically patterned with Icelandic in its verb placement patterns, but has been shown to be at a late stage of losing the obligatory movement in embedded clauses that is characteristic of Icelandic and Old Norse (see e.g., Petersen 2000, Thráinsson 2003, Wiklund et al. 2009). In earlier accounts, the change in Faroese has been described as a loss of V-to-I movement (e.g., Jonas 1996, Thráinsson 2003, Heycock et al. 2010). In our account, we describe the change as a loss of general finite verb-to-C movement, and a development towards an assertion/SAP-based system, like the one in Mainland North Germanic (MNG) (cf. Section IV.3.2).

Though Faroese has developed in the direction of the Mainland North Germanic languages with respect to embedded verb placement, Heycock et al. (2010, 2012) show that its syntax is still distinct from Danish. In our production experiment, we find that Faroese speakers produce embedded Verb > Adverb orders to a greater extent than speakers of Mainland North Germanic (i.e., Danish, Norwegian and Swedish), who produce surprisingly few instances of embedded V2. In the acceptability judgement task, we find that extraction interacts with verb movement for Faroese speakers.

IV.5.1.1 Elicited production

The elicited production experiment was also run in Denmark, Norway and Sweden. We will only briefly discuss the motivation, design, and material of this experiment.[16] The Faroese production experiment and a brief overview of the results have previously been published in Westendorp (2020).[17]

[16] This research is part of the Nordic Word order Database (Lundquist et al. 2019), and all the segmented and coded audio from the experiment is available online in the database. More information about the setup of the experiment and the data analysis, as well as all the material used is available in a GitHub repository. We refer the reader to (Lundquist et al. 2019) where the motivations and design of the experiments and the word order database are extensively discussed.

[17] The same goes for the Norwegian data Westendorp (2021a) and for Danish and Swedish Westendorp (2021b).

A total of 161 native speakers of four different North Germanic languages participated in this experiment (see Table 3).[18] Most of the data was collected in high schools in the different countries, but we were careful to also include older participants in the Faroese experiment as generational differences between speakers with respect to verb movement possibilities have been hypothesised here (see e.g., Jonas 1996).

Table IV.3: Overview of participants across locations.

	Participants	Mean age in years
Faroe Islands	32	old (52.8) (N = 15)
		young (18.9) (N = 18)
Denmark	12	27.3
Norway	96	21.8
Sweden	21	22.4

Participants were presented with an elicited production paradigm where they were tasked to read a main clause out loud and subsequently embed this sentence in a new main clause that was provided, as illustrated in (53) with an example in English:

(53) a. I always listen to the radio in the car. [read-aloud sentence]
b. Ása said that ... [trigger]
c. she always listens to the radio in the car. [target response]

We manipulated both the matrix verb and the adverb in the experimental items. For the experiment there are thus 3 independent variables:

1. Language (Faroese, Danish, Swedish, Norwegian)
2. Type of clause/embedding verb (assertive complements of 'say'; complements of the factive predicate 'be proud'; interrogative complements of 'ask')
3. Sentence-medial adverb ('often', 'always', 'never')

The dependent variable is the relative order of the finite verb and adverb (Verb > Adverb or Adverb > Verb). We use different adverbs and not negation to create a context that triggers (as much as possible) a habitual or generic present tense reading since negated sentences are often perceived as having a specific time. By varying the clause type, specifically the embedding verb, we test whether participants are sensitive to clause type in their choice of word order. We additionally vary the adverb, as it is claimed in the literature that the acceptability of Verb > Adverb in relative clauses differs depending on the specific adverb (e.g., Bentzen et al. (2009), Wiklund et al. (2007: 216). In the examples below, we provide examples in Faroese from the three test conditions: assertive, factive and interrogative complements.

(54) Óli segði at han {komi} aldri {komi} ov seint til arbeiðis.
Ole says that he {comes} never {comes} too late to work
'Paul says that he often drives to work.' [assertive complement]

[18]The Norwegian experiment was run with a few different participant groups at various locations. The number of Norwegian participants is therefore much larger than for the other languages. A full overview of these different groups, locations and experiments is provided in Westendorp (2021a).

(55) Páll er stoltur av at han {súkkli} altíð {súkkli} til arbeiðis.
Paul is proud of that he {bikes} always {bikes} to work
'Paul is proud that he always bikes to work.' [factive complement]

(56) Óli spurdi um Ása {fer} ongantíð {fer} í býin leygarkvøld.
Ole askes if Ása {goes} never {goes} in town Saturday.night
'Ole askes if Ása never goes out on Saturdays.' [interrogative complement]

The experiments were run on laptops, and recordings were made through an external recorder, when possible, with lavalier microphones. All participants signed consent forms and filled in a minimal background questionnaire before doing the experiment. In order to establish the degree of verb movement across the different conditions, all elicited material was coded for order of verb and adverb using the annotation software ELAN (Wittenburg et al. 2006). The statistical analyses were conducted in the statistical programming language R (R Core Team 2020). The package 'tidyverse' (Wickham et al. 2019) was used for data processing and visualisation. The packages 'lme4' (Bates et al. 2015) was used for modelling. We used mixed effects logistic regression to test some of our hypotheses. The dependent variable is always Word order; only Verb > Adverb and Adverb > Verb orders were taken into account, utterances with any other word order were disregarded for the statistical analyses to ensure a binary outcome. To account for by-participant variation for fixed effects, we included by-participant and by-item random intercepts. Fixed effects are tested for significance by comparing a model which lacks that fixed effect to the full model.

IV.5.1.2 Results

We will now discuss the results for the four languages together before taking a closer look at the results in Faroese. In the following we have removed all experimental items with the adverb 'often' which can potentially be vP-internal (see discussion in Westendorp 2021a); the remaining results thus only include sentences with the clear IP-adverbs 'always' or 'never'. We split the results of the experimental production paradigm by clause type and language in Figure 1. We find surprisingly few instances of high verb placement in Norwegian, Swedish and Danish compared to Faroese. Moreover, the numbers for Norwegian, Swedish and Danish are notably lower than reported in (spoken) corpus data from these languages, i.e., 45% of the complement clauses with negation in the spoken Danish LANCHART corpus have V2-order (Jensen & Christensen 2013), and similar numbers are found for Norwegian (35.9%, Ringstad 2019: 342) and Swedish (35%, Garbacz 2005).

For Faroese (as well as for Norwegian), we see a difference in the percentage of high verb responses across the three clause types. Specifically, Verb > Adverb order is most frequent in assertive complements, and least frequent in embedded questions. Faroese thus seems to be moving towards a system where high verb placement is restricted to a specific type of clause, meaning that it no longer has the obligatory Icelandic-type verb movement to C. Two-thirds of the Faroese speakers (22/33 speakers) produce both word orders in the assertive condition, showing that there is a lot of variation, not only in the language but also within speakers.

Remember that the Faroese participants were split into two groups: both young (<35 years old) and older (>35 y.o.) speakers were included in this experiment (Table 3). This was a deliberate decision as it has been argued in the literature that there is a generational difference in the acceptance of high verb placement in Faroese (Jonas

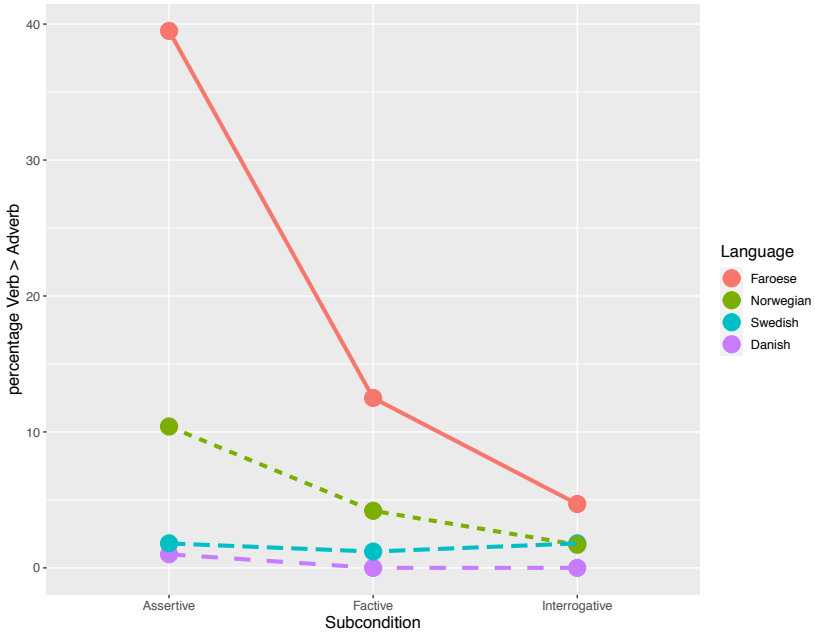

Figure IV.1: Clause type influences the proportion of Verb > Adverb orders in Faroese and Norwegian.

1996, Thráinsson 2003). More recently however, Heycock et al. (2012) found only weak evidence for a generational difference in the acceptability of verb movement in Faroese. Heycock et al. do find that overall, older speakers more readily accept verbs in the high position. In our experiment, the results from the two age groups also differed slightly (see Table 4). But as in Heycock et al. (2012), it is not clear that the older speakers have a different grammar or derivation for embedded verb movement than the younger speakers.

Table IV.4: By age group percentages Verb > Adverb and Adverb > Verb orders produced per clause type in Faroese.

	Young speakers (N = 15)		Older speakers (N = 18)	
Clause type	V > Adv.	Adv. > V	V > Adv.	Adv. > V
Assertive compl.	28.9%	71.1%	54.8%	45.2%
Factive compl.	14.5%	85.5%	10.9%	89.1%
Embedded quest.	3.9%	94.7%	3.9%	96.1%

The group of older speakers produced in total just over half of the assertive complements with a high verb (i.e., Verb >Adverb). The younger speakers produced this order in only 28.9% of the assertive clauses. In the other clause types, the groups do not differ as much. Overall, the difference between the groups is not significant ($\chi^2(1) =$

$0.01, p = .904$). However, the effect of clause type we observed above is significant ($\chi^2(2) = 43.10, p < .001$) and interacts with age group: $\chi^2(2) = 14.51, p < .001$. In conclusion, the results of the production study seem to show that Faroese is losing generalised movement of the finite verb to C. Instead, this movement is becoming correlated with a specific semantics, as in the MNG languages. In fact, when comparing the two generations, the younger speakers seem to have rapidly developed a verb placement system that is quite similar to the system of the Norwegian speakers in our experiment.

IV.5.1.3 Acceptability judgement task

In the production task we have seen that Faroese is moving towards a Mainland North Germanic system for the placement of the (embedded) finite verb. We now present the results of an acceptability judgement task that tests the acceptability of high verb placement as well as the interaction of verb movement and extraction in Faroese. We collected judgements on verb movement in the same contexts as our production experiment to consolidate those results. As embedded V2 is only optional, not obligatory, the default Adverb > Verb order is predicted to be rated higher overall than EV2. We expect a similar difference in acceptability of EV2 between clause types as in the production task, with higher ratings of EV2 in assertive contexts than in factive contexts, and the lowest scores for this order in embedded questions. Furthermore, we expect *wh*-extraction to interact with verb placement specifically for those speakers for whom embedded verb movement is correlated with an assertion semantics. As discussed in Section IV.4.4, it has been shown that extraction from EV2 clauses is possible even in MNG, despite common claims to the contrary in the literature. We have argued that extraction is blocked, however, when the sentence consists of two partly independent speech acts, i.e., the main clause and the EV2 clause, which prohibits movement out of the clause.

Judgements were elicited from 47 native Faroese speakers in an online task that tested verb movement in assertive, factive and interrogative contexts as well as *wh*-extraction from embedded clauses.[19] An example of the latter condition is given in (57).

(57) [Hvønn film]$_i$ helt Óli, at Eivindi dámdi ikki t$_i$?
which film thinks Ole that Eivind liked not
'Which film did Ole think that Eivind did not like?'

The acceptability judgement task was made up of 50 items in total. Items were divided over two randomised lists with a small break in between. We manipulated both the clause type and the adverb in the experimental items. All experimental items occurred twice, once with verb movement and once without movement. Two versions of the same item never occurred in the same list. The experiment included the following conditions:

1. 8 assertive complements of the verb *siga* 'say'

[19] This experiment was developed in collaboration with Filippa Lindahl (University of Gothenburg) and Craig Sailor (University of Edinburgh). In addition to the conditions discussed in the present study, the questionnaire tested light object fronting, NP-object shift and VP-ellipsis.

2. 4 factive complements of the predicate *vera stoltur av* 'be proud of'
3. 4 interrogative complements of the verb *spyrja* 'ask'
4. 8 *wh*-extractions from the complements of *halda* 'think' and *siga* 'say'

The stimuli in the first three conditions included the following adverbs: *ikki* 'not', *altíð* 'always' and *ongantíð/aldri* 'never'. To these 24 items we added 22 fillers (10 ellipsis, 8 placement of expletive *det* 'it', 4 NP-object shift) and 4 ungrammatical sentences (2 long object shift, 2 long particle shift). The experiment was designed as an online task and could be run on participants' own computers or mobile devices. Participants were instructed to judge the acceptability of the sentences on a scale from 1 to 7, with 1 labelled *ringur* 'poor/unacceptable', and 7 labelled *rættvorðin* 'acceptable'. Sentences were presented one at a time on screen, with no opportunity to go back to earlier items.

Forty-seven native speakers of Faroese participated in the judgement task. We contacted speakers through the contacts at the schools where we ran the production experiment, and by putting out a call on Facebook. All participants were volunteers. Three participants were excluded from the results on the basis of their ratings of the ungrammatical sentences. These participants had a mean rating of the four ungrammatical sentences that was more than 1 SD removed from the group mean for these sentences (M = 1.73, SD = 1.69). The mean ratings per condition are provided in Table 5.

Table IV.5: Mean ratings and standard deviations (in brackets) per condition on a scale from 1–7.

Condition	V-in-situ	Verb movement
Assertive complement	5.35 (1.90)	4.89 (2.16)
Factive complement	4.98 (2.40)	2.48 (1.68)
Embedded question	6.20 (1.48)	2.61 (1.91)
Extraction	5.34 (1.97)	2.87 (2.00)
Ungrammatical	NA	1.53 (1.42)

The first noteworthy result is that assertive complements with and without movement are rated similarly. Both orders (i.e., Verb > Adverb and Adverb >Verb) are accepted. An example of the assertive complement condition is given in (58).

(58) *Faroese*

a. Ása heldur, at Jógvan aldri hevur lisið Ringanna Harri.
Ása thinks that Jogvan never has read Lord of the Rings
'Ása thinks that Jogvan never read Lord of the Rings.' [V-in-situ]

b. Ása heldur, at Jógvan hevur aldri lisið Ringanna Harri.
Ása thinks that Jogvan has never read Lord of the Rings
'Ása thinks that Jogvan never read Lord of the Rings.' [Verb mvt]

This is not the case for other embedded contexts: as expected, embedded questions and factive complements with Verb > Adverb order are rated as less acceptable than the non-movement versions of these clauses. There is quite some dispersion in the ratings across all categories as indicated by the large standard deviations. To eliminate individual biases in the use of the rating scale, we z-score transformed the raw ratings by participant. The ratings for the four embedded clause conditions for the remaining participants are presented in a density plot in Figure 2.

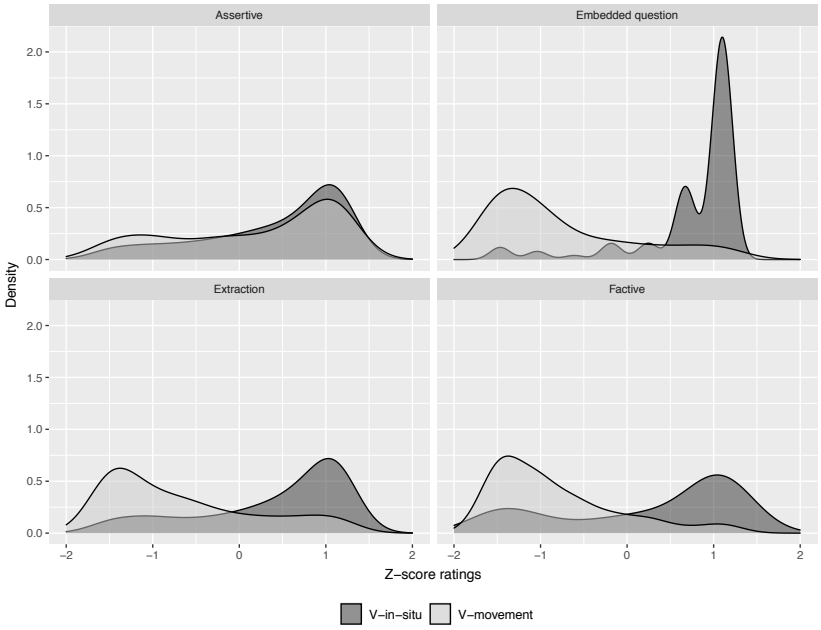

Figure IV.2: Distribution of z-score ratings for the four experimental conditions.

The density plot in Figure 2 shows the entire distribution of the ratings for the V-in-situ and V-movement items in the four experimental conditions, with peaks displaying where values are concentrated on the interval. Large tails in the distributions show that participants differ in their judgements across all four experimental conditions. Still, we see clear peaks in all distributions. Figure 2 confirms that assertive sentences with and without movement are judged very similarly, and that this is not the case for factive and interrogative complements. In the latter two conditions, we see a bi-modal distribution in the plot, whereas the distributions for movement and no-movement items in the assertive condition overlap. For the items testing extraction out of the embedded clause, we find that the V-in-situ items are judged similarly to the V-in-situ items in the other conditions. Extraction out of embedded clauses with a high verb however, is overall judged to be as unacceptable as high verb placement in non-assertive complements. We provide an example of the extraction condition in (59).

(59) *Faroese*

a. Hvat segði Páll, at Maria altíð etur til morgunmatar?
what said Paul that Maria alway eats for breakfast
'What does Paul say Maria always eats for breakfast?' [V-in-situ]

b. *?Hvat segði Páll, at Maria etur altíð til morgunmatar?
what said Paul that Maria eats always for breakfast
'What does Paul say Maria always eats for breakfast?' [V-movement]

Overall, sentences like (59-b) are judged as 'poor' (2.87/7; see Table 5). As assertive

complements with verb movement are judged as acceptable (M = 4.89) we assume that the high placement of the verb is correlated with assertion which blocks extraction because of the independent status of the clause (cf. Section IV.4.4).

In conclusion, Faroese speakers overall accept and produce high verb placement in assertive contexts. Moreover, extraction from embedded clauses with high verb placement is clearly not accepted by all speakers. Together these results suggest that Faroese is moving towards a Mainland North Germanic system for embedded verb placement where high verb placement is correlated with assertive semantics. In the production experiment, we observe a clear difference in the production of Verb > Adverb orders across clause types with the largest percentage of this order in assertive contexts, which favours this conclusion. In other words, embedded finite verbs no longer obligatorily appear in a high position and verb placement is no longer categorically based on the finiteness of the verb (the system we hypothesised for Icelandic and older varieties of MNG). There are however still Faroese speakers that accept high verb placement across different embedded contexts, and crucially, extraction from these clauses. We would not expected this if a C-as-finite derivation was not available in speakers' grammars at all.

IV.5.2 Non-V2 in Norwegian main clause *wh*-questions

Throughout this paper we have focused for the most part on variable verb placement in embedded clauses. Yet, we also find examples of variable verb placement in main clauses in Mainland North Germanic. As mentioned earlier, main clause *wh*-questions in many varieties of Norwegian allow both high and low placement of the verb. This word order variation has been extensively discussed in Norwegian dialectology over a long period (see e.g., Nordgård 1985, Taraldsen 1986, Vangsnes 2005, Vangsnes & Westergaard 2014, Westergaard et al. 2017, Westendorp 2018). Two examples of non-V2 word order in main clause *wh*-questions are given below.

(60) *Norwegian*

a. Kem som ikke **kommer** på festen?
who that not come on the.party
'Who did not come to the party?'

b. Kor du alltid **går** på tur om sommeren?
where you always go on hike during the.summer
'Where do you always hike in summer?'

The verb has not moved in the examples in (59), as is evident from the verb occurring to the right of the sentence adverb. In the subject-*wh*-question in (60-a), the complementizer *som* occupies the second position; in (60-b), there is no subject-verb inversion. These non-V2 main clauses have the same order as embedded questions (cf. (60)):

(61) *Norwegian*

a. Han spurte [kem som ikke **kommer** på festen].
he asked who that not come on the.party
'He asked who did not come to the party.'

b. Ho lurte på [kor du alltid **går** på tur om sommeren].
she wonder on where you always go on hike during the.summer

'She wondered where you always hike in summer.'

In all dialects that allow this non-V2 word order in main clause *wh*-questions, the standard V2 word order is also always grammatical. The possibilities for this order variation differs from dialect to dialect and have been show to depend mainly on the form and function of the *wh*-element (Westergaard et al. 2017, Westendorp (2018). Some Norwegian dialects, for example the dialect of Tromsø, only allow non-V2 word order in *wh*-questions starting with a monosyllabic *wh*-word (see e.g., Iversen 1918, Taraldsen 1986, Rice & Svenonius 1998). The distinction in word order possibilities between short and longer *wh*-elements has been accounted for by arguing that the former are heads while the latter are phrases. In this way, the short *wh*-element may occupy the V2-position, thus allowing the verb to stay low (Westergaard & Vangsnes 2005). Alternatively, Rice & Svenonius suggest an Optimality Theoretic approach to the optionality of non-V2 with mono- but not polysyllabic *wh*-expressions in the Tromsø dialect. They argue that the syntax provides two possible structures but restrictions on the phonology prevent non-V2 order with longer *wh*-expressions. In the Sogn dialect, non-V2 word order is possible in all types of *wh*-questions, also when the *wh*-elements is clearly a phrase:

(62) *Sogn Norwegian*

a. Ke fillma hann **ha** spellt i?
what films he has played in
'What films has he been in?'

b. Kefø han **va** so sure?
why he was so angry
'Why was he so angry?'

Westergaard & Vangsnes (2005) propose that the V2-requirement is lifted in *wh*-questions in dialects which allow non-V2 word order in all types of main clause *wh*-questions. However, even in these dialects, the standard V2 word order is always a possible alternative as well (Vangsnes 2007, Westendorp 2017). In the hitherto unpublished work of Westendorp & Vangsnes (2021), the constraints and possibilities of this word order variation in the Sogn dialect are further investigated. The study is based on production data that was collected from 22 speakers of the Sogn dialect using semi-structured interviews and gamified dialogue (e.g., quizzing each about details of a picture, "Guess who?"-game). The total set of *wh*-questions collected contained 699 observations, of which 203 (29.0%) had non-V2 order. All but 2 participants varied between the two possible word orders in their production. The two remaining participants only produced V2 orders. Inspired by Wood (2011), who studied the conditioning effects of several linguistic factors on Stylistic Fronting in Icelandic, all *wh*-questions in the data set were coded for word order and a number of syntactic and prosodic factors. The data show that word order is truly variable in *wh*-questions with certain characteristics. An almost equal amount of V2 and non-V2 orders is found in *wh*-questions with:

- any monosyllabic *wh*-word (*ka*, *kem*, *når* 'when' or *kor* 'who') (N = 316, 53% V2);
- both a short *wh*-word and a monosyllabic second element (i.e., a pronominal subject or the complementizer *som*) (N = 281, 48% V2).

On the other hand, of the *wh*-questions starting with a *wh*-phrase such as *kå tid* 'what time' or *ka farrge* 'which colour', only 12.8% are produced with non-V2 order. Other characteristics favouring V2-order (>70%) are:

- DP and expletive subjects;
- subjects with 2 or more syllables;
- the verb is a main verb (as opposed to a copula or auxiliary).

It is clear that prosodic, syntactic and lexical factors may influence the optional syntactic operation of verb movement in *wh*-questions in this dialect. However, no one factor strongly favours non-V2 word order.

There is really no strong evidence for a theory where short *wh*-elements (optionally) behave like heads that can block movement to the V2-position. In regular V2-contexts, these elements behave like phrases. Moreover, there clearly is intraspeaker variation in word order in these *wh*-questions. Finally, in the Sogn dialect, where any type of *wh*-element may occur with non-V2 order, there is still a preference for exactly the short elements with this order. We argue that this is not a result of the fact that these elements might behave as heads, but a reflection of lexical and prosodic factors and possible commonly co-occurring items that stick together (e.g., *ka du* 'what you ...' or *kor du* 'where you ...'). Crucially, both orders should thus be possible in one and the same grammar.

IV.6 Discussion

In this paper we have presented two data sets from North Germanic where verb placement is variable and deviates from the standard asymmetric V2 pattern. We have focused on Faroese embedded V2, which we contrasted with the Mainland North Germanic languages Danish, Norwegian and Swedish; and on word order variation in main clause *wh*-questions in the Sogn dialect of Norwegian. In both cases, it is clear that there is variation not only within the language, but also within the same speaker.

Various proposals to describe and account for the possibility of the main clause V2 word order in embedded clauses have been presented in the literature. In this paper we have focused on the accounts by Wiklund et al (2009), Julien (2015) and Nyvad et al. (2017). The within-language and within-speaker variation that we observe in both Faroese and Sogn Norwegian, lead us to conclude that verb placement in North Germanic cannot be grammaticised in terms of size of the embedded complement or in terms of features in the C-domain as in earlier accounts. Instead we have argued in favour of an account of Mainland North Germanic verb movement that can incorporate the optionality we find. We have proposed that embedded and main clauses are of the same size, and that regular *that*-clauses are structurally identical to a subject-initial main clauses, bar the position of the verb. We have been vague about our actual analysis of the complementizer *at(t)* but we assume like Julien (2015) that it always is above the typical V2-position, and thus outside of the C-domain. We illustrate this approach to main (see (63)) and embedded clauses ((64)) once more below.

(63) Main clause V2 and non-V2:

V-to-C:	[$_{CP}$ Synne$_j$][$_{C^0}$ spiste$_i$]	[$_{IP}$ t$_j$][$_{vP}$ t$_i$ en kanelbulle i går.]
	Synne ate	*a cinnamon bun yesterday*
wh V-to-C:	[$_{CP}$ Ka$_j$][$_{C^0}$ spiste$_i$]	[$_{IP}$ Synne][$_{vP}$ t$_i$ t$_j$ i går.]
wh V-in-situ:	[$_{CP}$ Ka$_j$][$_{C^0}$]	[$_{IP}$ Synne][$_{vP}$ spiste t$_j$ igår.]
	what(ate)	*Synne (ate) yesterday*

(64) Embedded clause V2 and non-V2:

V-to-C:	att [$_{CP}$ Ida$_j$]	[$_{C^0}$ åt$_i$][$_{IP}$ t$_j$]	[$_{vP}$ t$_i$ gröt i morse.]
V-in-situ:	att [$_{CP}$ Ida$_j$]	[$_{C^0}$][$_{IP}$ t$_j$]	[$_{vP}$ åt gröt i morse.]
	that Ida	*(ate)*	*(ate) porridge this morning*

In contrast to Julien (2015) and Eide's (2011) approaches to the MNG C-domain that we discussed in this paper, we have assumed a much more minimal CP-structure. The C head is available for typical V2 movement, with specCP available for the initial clause element; if the verb remains low, it stays in vP (as in the bracket structure above). If there is no verb movement, i.e., in all non-V2 clauses, the C head is empty. In our view it does not need to be licensed by a specific type of element. In this sense it is similar to I^0 which can also remain empty. Unlike previous approaches to MNG verb placement we do not take the possibility of V2-movement in the presence of a complementizer to be a sign of more, or less structure.

V-to-C movement in embedded clauses in MNG is usually linked with a specific semantics, such as Speech Act Potential in Julien (2015, 2020). Although we agree with Julien (2015) that semantics is influencing verb placement possibilities, we have throughout this paper argued that fully uniting V2 to a specific notion of assertion, i.e., incorporating it into the syntax, is untenable. Our strongest argument against such a tie is the verb placement variation in Norwegian imperatives and main clause *wh*-questions where both word orders are possible without a difference in interpretation.

The empirical data that we have provided from variation in verb placement in both (Faroese) embedded and (Sogn Norwegian) main clauses provide further evidence in favour of a symmetrical approach to V2 and V-in-situ clauses where the verb position is not grammaticised. The two cases show two sides of the same kind of instability of the C-head. It is clear however that the Mainland North Germanic languages, as well as Faroese, have moved away from a verb placement system where the C-position is associated with finiteness towards a system where the C head marks some kind of assertion. However, the semantic difference between the two positions is very small and not (yet) categorical. Furthermore, the specific semantics of both positions may be context-dependent and moreover differs between languages and varieties.

Still, the position of the verb has reliable syntactic consequences. We have suggested that the difference in the external syntactic properties and distribution of clauses with the verb in C or v falls out of the semantics of these positions and the resulting clauses. In this respect our approach is strikingly different from approaches that connect the external properties of the clause to the internal structure of the CP (cf. Section IV.4.4).

IV.6.1 Remaining questions

There are two core components in our analysis that we have not yet developed in great detail. The first one is that the word order change that took place recently in Faroese, and earlier in the MNG languages, should be analysed as a loss of obligatory finite V-to-C movement, and not as loss of V-to-I movement. The second one is that the main/embedded distinction, or more generally, the role of Speech Act Potentials (in the sense of Krifka (2001) as adapted by Julien (2015), cannot alone account for variable V2: we also need to look at the particular illocutionary force. We will discuss these two components below.

The V-to-I account has the benefit of being able to locate a trigger for the change in word order patterns: the loss of a morphological category INFL has been taken as the trigger for changes in the syntax, although this account has been criticised from various positions, see e.g. Håkansson (2011) and Heycock & Sundquist (2017). We mentioned briefly in the introduction that we may see the "variable" MNG system as a development of a new Mood system, which replaced the old morphological mood system. This also suggests a certain link between morphological change and syntactic change, but this link is presumably less direct than in the V-to-I proposal. We may think of this change as one of many changes where positional cues, i.e., word order, becomes more prominent as the rich inflectional system disappears. Note also that we do not claim that the new mood system necessarily encodes the same categories as the old subjunctive-indicative system: mood systems across the world's languages differ to a large degree in what categories they encode.

Still, in the Old Norse system there was a dichotomy of finite and non-finite verbs, which was both morphologically and syntactically robust: finite verbs carried tense and agreement information, and were always placed in second position, while non-finite verbs had no tense and agreement, and were placed low in the clause.[20] Why then did finite verbs in a subset of clauses start patterning as non-finite verbs? In a V-to-I approach combined with a Den Besten-style V-to-C analysis, this question has a fairly straightforward answer. In our approach, we have to look for answers elsewhere. We suspect that the right place to look is in the second component mentioned above, that is, in the role of a particular illocutionary force. As we depicted in Table 1, not only do main clause questions differ from declaratives in the instability of verb placement, questions also show more (non-)V2 stability than declaratives in embedded contexts. The variation with respect to verb placement in embedded declarative clauses (i.e., *that*-clauses) is well established, but as far as we are aware, no Mainland North Germanic variety allows typical Icelandic word order in embedded questions, as in (65-a). Rather, the corresponding V-to-C version of an embedded question requires subject-verb inversion, although this is more marked than declarative embedded verb second (65-b)

(65) a. *Han ville veta vilken bok du hade inte läst.
he wanted to.know which book you had not read
b. ?Han frågade vilken bok hade du inte läst.
he asked which book had you not read
'He asked/wanted to know which book you hadn't read.'

[20] This is of course a slight simplification. Modern Icelandic may have non-finite verbs in a fairly high position in ECM and raising constructions, and sentence adverbs preceding finite verbs can be found both in both Modern Icelandic and Old Swedish, see Angantýsson (2017) and Håkansson (2011).

We may speculate that embedded questions were the first context where generalised embedded V2 disappeared. In a generalised V2 system, V2 will occur in three different manifestations in main clauses: (1) in subject-initial clauses, triggered by default movement of subjects to first positions; (2) in *wh*-initial clauses, triggered by *wh*-features in the moving constituent; and (3) in topicalised sentences, triggered by text cohesion. The corresponding three clause types all have equivalents in subordinate clauses. For type (1) and type (3), the structures are identical in main and embedded clauses. However, as we have seen, *wh*-initial clauses cannot have the same structure in main and embedded contexts: the *wh*-element is clause-internal in main clauses, but clause external in embedded contexts, as evidenced by the availability of stylistic fronting in embedded subject questions and the word order in embedded non-subject questions (*wh* > subject > verb). When rich verb inflection disappeared from MNG, subjectless sentences also disappeared (Platzack 1988, Falk 1993). In a grammar which requires overt subjects in finite clauses, the embedded *wh*-subjects can no longer be analysed as clause external, but will be given the same analysis as main clause *wh*-subjects: i.e., they are located in SpecCP. Once embedded *wh*-subjects are analysed as clause-internal, the same analysis may be assumed for embedded non-subject questions. However, in this case, generalised V2 must be re-evaluated, as the outcome is a V3-sentence. Embedded questions are likely to be a vulnerable domain since they rarely contain negations and high speech act particles/adverbs like *ju, nog, väl*, which otherwise provide reliable information about the absolute placement of the verb (see Heycock & Wallenberg 2013). From embedded questions, the non-V2 word may spread to other non-assertive clause types.

There are still some loose ends in our analysis. The very templatic approach is unlikely to cover all the micro-variation found in the Mainland North Germanic varieties. Still, we see great potential in covering the main patterns, as sketched in Table 1, by going back to a more sparse clause structure. In many ways, our proposal is similar to pre-cartographic proposals like the one in Rögnvaldsson & Thráinsson (1990). The observant reader may have noted that everything we say could in principle be captured in a C–I–V system, where what we call C in fact is I, and the complementizer is firmly located in C.

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Addenda

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Research data management

All data that have been generated during this PhD trajectory were collected according to the Declaration of Helsinki. The identity of the research participants has been anonymised to the greatest extend possible. Informed consent to participate in the studies was always obtained from participants (or their legal guardian). The data discussed in **Papers I**, **III** and **IV** from the Nordic Word order Database are stored at the Text Laboratory at the University of Oslo, part of the European CLARIN infrastructure. Files related to the Nordic Word order Database, including test material, experiment scripts, and analysis scripts and guidelines, are available in a GitHub repository. The data sets from Sogn Norwegian, and the Faroese acceptability judgement task included in Paper IV are not currently available online, but available upon request. Published data as part of this thesis and additional data can be requested through the corresponding author.

Author contributions

Paper I: Variable Verb Second in Norwegian main and embedded clauses

This project is part of the Nordic Word order Database (Lundquist et al. 2019). The experimental paradigm was developed by Westendorp & Lundquist. The fieldwork in Tromsø was organised by Westendorp & Lundquist and carried out with the help of several research assistants (see article Acknowledgements). Any necessary code was written by Westendorp in collaboration with Lundquist. The results were statistically analysed by Westendorp. Westendorp is the sole author of the text, but the text was discussed during several supervision meetings, as well as with the PI of the project Ida Larsson (UiO). Based on valuable feedback from Björn Lundquist, Øystein A. Vangsnes, Ida Larsson, and reviewers from the Nordic Atlas of Language Structures (NALS) Journal, Westendorp rewrote and revised this manuscript into its published form.

Paper II: Word order variation in Norwegian *wh*-questions

Some of the data and analysis in this article is based on research conducted during Westendorp's Master program at the University of Amsterdam. This research benefitted from valuable feedback from Arjen Versloot and Fred Weerman. Westendorp is the sole author of this text. Feedback from Øystein A. Vangsnes and reviewers from NALS has further helped refine the published version of this manuscript.

Paper III: Code-switching alone cannot explain intraspeaker syntactic variability

This project is part of the Nordic Word order Database (Lundquist et al. 2019) and the experimental paradigm was developed by Westendorp & Lundquist. Fieldwork at different schools in Tromsø was organised by Westendorp & Lundquist and carried out with the help of several research assistants (see article Acknowledgements). Eline Grønvoll and Maud Westendorp transcribed and tagged all the data. Necessary code for analysis was written by Westendorp and Lundquist. The results were statistically analysed by Lundquist. Westendorp and Lundquist collaborated on the first version of this manuscript. Strand joined the project at a later stage and contributed with discussion of the manuscript, interpretation of the data and further revisions of the manuscript. The authors of this paper follow the Vancouver rules for authorship.

Paper IV: Unstable verb placement and the North Germanic CP

The data on embedded verb placement in this article is part of the Nordic Word order Database (Lundquist et al. 2019). The experimental paradigm to collect this data was developed by Westendorp & Lundquist. The fieldwork in the Faroe Islands, Denmark

Gísli Jónsson. The Norwegian fieldwork was organised by Westendorp and Lundquist. The data from Sogn Norwegian was kindly provided by Øystein A. Vangsnes. All (pre)processing of the Sogn data was done by Westendorp. The acceptability judgement experiment was a collaboration between the authors of this article and Filippa Lindahl and Craig Sailor. Any statistical analysis in this manuscript was done by Westendorp. Westendorp and Lundquist wrote the text together. The authors of this paper follow the Vancouver rules for authorship. The authors thank Gillian Ramchand for her valuable feedback on our draft.

Curriculum Vitae

Maud Westendorp was born on 10 May, 1990 in Leiderdorp, the Netherlands. She completed her bachelor's degree in Linguistics at Leiden University in 2014 with a special focus on theoretical and psycholinguistics. During her Bachelor program, she also completed a minor in Scandinavian linguistics and Norwegian language at the University of Amsterdam. Deciding to focus on Scandinavian linguistics, Maud went on to study at the University of Amsterdam, enrolling in the Research Master program in Linguistics there. During her time at the University of Amsterdam, Maud worked as a student assistant and assistant lecturer in the department of German and Scandinavian Languages & Cultures. She studied the optionality of Verb Second in Norwegian *wh*-questions for her thesis under the supervision of prof. A.P. Versloot and prof. F.P. Weerman and completed her MA (Res) degree in early 2017. After working as a lecturer at the University of Amsterdam for a semester, she enrolled as a PhD student at the Center for Advanced Study in Theoretical Linguistics (CASTL) at UiT The Arctic University of Norway in August 2017. The present dissertation is the result of work she carried out there under the supervision of Björn Lundquist and Øystein A. Vangsnes. Maud has presented her research at multiple national and international conferences and workshops, including at the 43. Jahrestagung der Deutschen Gesellschaft für Sprachwissenschaft (DGfS) 2021, Linearising Constituents Across Domains 2020, the International Conference of Language Variation in Europe 10, the European Dialect Syntax Workshop IX, and the 11th Nordic Dialectologists Conference. In addition to her work as a PhD candidate, Maud devoted her time to being a health and safety representative for the department of Language and Culture at UiT and served as a member of the Department Board (2020). She furthermore participated in several teaching and organising activities for the CASTL research group, the department of Language and Culture at UiT, and the Norwegian Graduate Researcher School in Linguistics and Philology LingPhil. Maud is a member of the Scientific Research Network 'Re-examining dialect syntax' (2020–2024) funded by the Flanders Research Foundation (FWO) and has been a participant in the project 'Variation and Change in the Scandinavian Verb Phrase' (2018–2020) funded by the Research Council of Norway (NFR) and the University of Oslo.

Publications not included in this thesis

in press	Maud Westendorp. 'Variation in verb placement in Swedish and Danish'. *Nordic Atlas of Language Structures (NALS) Journal* 6(1).
2021	Maud Westendorp & Björn Lundquist. 'Tverrspråklig innflytelse fra L1 i tilegnelsen av argumentplassering i L2 norsk og svensk'. [Crosslinguistic influence from L1 in the acquisition of argument placement in L2 Norwegian and Swedish]. *Norsk Lingvistisk Tidsskrift* 39(1): 13–40.
2020	Maud Westendorp. Verb placement in embedded sentences in Faroese. *Nordic Atlas of Language Structures (NALS) Journal* 5(1): 28–42.
2019	Björn Lundquist, Ida Larsson, Maud Westendorp, Eirik Tengesdal & Anders Nøklestad. 'Nordic Word order Database: motivations, methods, material and infrastructure'. *Nordic Atlas of Language Structures (NALS) Journal* 4(1): 1–33.
2018	Maud Westendorp. 'Transparency and language acquisition of Scandinavian'. *Linguistics in Amsterdam* 11(2): 59–88.
2017	Maud Westendorp, Marieke Olthof, Jelke Bloem & Fred Weerman. 'Synchronic variation and diachronic change in Dutch two-verb clusters'. *Journal of Dutch Linguistics and Literature* 133(1): 34–60.

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