Verb Second in Norwegian: Variation and acquisition

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Abstract

This chapter provides an overview of the micro-variation in Norwegian when it comes to Verb Second (V2) word order, both in the various dialects and in the two written standards. The variation is dependent on a number of factors, including clause type, type of initial element, and information structure. This overview demonstrates a rich inventory of micro-systems, raising the question of how children come to acquire such fine-grained patterns. The chapter addresses this question by providing findings from acquisition research and discusses what this considerable micro-variation and co-existing grammars tell us about the architecture of the human language faculty.

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1. Introduction

Norwegian, along with the other North Germanic languages, is generally considered to exhibit the Verb Second (V2) phenomenon, i.e. the property that the finite verb appears in the second position of the clause. The examples of declarative clauses in (1)-(3) serve to illustrate this. In a subject-initial clause like (1), the finite verb must immediately follow the subject and precede the sentence adverb – the version where it follows both is ungrammatical. In (2), where the direct object is topicalized, the finite verb must immediately follow the object and precede the subject. Likewise, if a sentence starts with an embedded clause, such as the temporal clause in (3), the finite verb must immediately follow it – the subject cannot intervene between the initial embedded clause and the finite verb.

(1) **Ola spiser** aldri is / *Ola **aldri spiser** is.
Ola eats never ice.cream / Ola never eats ice.cream
'Ola never eats ice cream.'

(2) Is **spiser Ola** aldri / *Is Ola **aldri spiser**.
ice.cream eats Ola never / ice.cream Ola never eats
'Ice cream Ola never eats.'

(3) Når flyet er forsinket, **er passasjerene** irriterte / * **passasjerene er** irriterte.
when the.airplane is delayed are the.passengers annoyed / the.passengers are annoyed
'When the airplane is delayed, the passengers are annoyed.'

Still, Norwegian also displays non-V2 word order in a number of linguistic contexts. In some cases this is a matter of dialectal variation, in others it also applies to Norwegian generally, including the written standards. The perhaps most famous exception pertains to matrix *wh*-questions, where there is considerable micro-variation across dialects: While both standard written varieties of Norwegian (*Bokmål* and *Nynorsk*; see Venås 1993, Vikør 1995 for more on the Norwegian language situation) require V2, exemplified in the non-subject and subject questions in (4)-(5), many dialects allow non-V2 in these structures, as illustrated in (6)-(7) from the Tromsø dialect, with a little quirk for the subject question which we return to below.

(4) Hva **tror du** om dette? / *Hva **du tror** om dette? (Bokmål)
what think you about this / what you think about this
'What are your views on this?'

(5) Hvem **kommer aldri** som avtalt? / *Hvem aldri kommer som avtalt?
who comes never as agreed / who never comes as agreed
'Who never comes at the agreed time?'

(6) Ka **du trur** om dette? (Tromsø dialect)
what you think about this
'What are your views on this?'

(7) Kem **som aldri kommer** som avtalt?

who SOM never comes as agreed
'Who never comes at the agreed time?'

We return to this phenomenon below.

Since den Besten's (1983) analysis, further developed in Haider & Prinzhorn (1986), Platzack (1986), Holmberg (1986), Diesing (1990), Sigurdsson (1990), Rögnvaldsson & Thráinsson (1990), Vikner (1995), and Holmberg & Platzack (1995) among others, V2 has been analyzed as leftward movement of the finite verb, more specifically as V-to-C-movement. Such movement would cross the position of sentence adverbs and non-initial subjects and serve to account for the ungrammaticality of the b-examples above.

The traditional view of V2 is that it should be analyzed as a macro-parameter, which is manifested uniformly as V-to-C movement, typically argued to be triggered by some feature in the C position. Put differently, V2 is a monolithic phenomenon which is the surface realization of essentially the same grammatical operation. In the present chapter, we show that this is unlikely to be the case. Inspired by Weerman (1992), we argue that V2 is a 'conspiracy': it involves a range of different grammatical operations that may look similar on the surface. We assume a split C-domain (Rizzi 1997) and argue that the verb moves to different positions in the left periphery. Relatedly, we also consider multiple instances of non-V2 across and within varieties of Norwegian, which display a range of micro-variation typically related to clause type (e.g., subject vs. non-subject *wh*-clauses) and other syntactic and information structural factors. This is evidence against considering V2 to be a (macro-)parameter. Rather, any given language/dialect can have both V2 and non-V2 structures. Thus, we follow the micro-cue model of Westergaard (2009b, 2014) and do not assume that verb movement is triggered by a feature on the head position attracting the verb. Instead, the acquisition of verb movement is the result of a small piece of abstract syntactic structure, i.e. a micro-cue, created in learners' I-language grammars as a result of parsing (see section 4 for more information about this model).

The purpose of parameters was to account for variation across languages and children's effortless acquisition. The existence of considerable variation within languages raises the question of how such variation comes to be acquired by children. For each structure we discuss, we therefore comment on what is presently known concerning its acquisition, providing child language examples, mainly taken from a corpus of three children growing up in Tromsø between the ages of approximately 1;9 and 3;3 (Anderssen 2006, Westergaard 2009b). In general, the take-home message is that children acquire the variation in the input in a target-like fashion, with the occasional non-target-consistent examples typically being due to economy (i.e. lack of verb movement).

The paper now continues in section 2 by looking at declaratives and questions exhibiting V2 word order, while we discuss a range of cases which display non-V2 in section 3: non-subject and subject-initial declaratives, *wh*-questions, exclamatives, and embedded clauses. Section 4 discusses and contextualizes our view that V2 is not a holistic phenomenon, but rather involves a conspiracy of different structures that yield surface V2. The acquisition data are discussed within the micro-cue model of Westergaard (2009b, 2014), arguing that children are sensitive to fine

distinctions in the input from early on. We also provide some thoughts on the consequences of this for generative syntactic theory. Section 5 contains some concluding remarks.

2. V2 word order

2.1 Non-subject-initial declaratives

The V2 phenomenon is typically illustrated by the word order in non-subject-initial declaratives, which is characterized by the finite verb immediately following an initial phrasal constituent and crucially preceding the subject, as shown in (8).

(8) a. Bøker **har Paul** lest så lenge han kan huske.
Books have Paul read as long he can remember
'Paul has been reading books for as long as he can remember.'

b. I går **hadde Paul** lest mange bøker.
in yesterday had Paul read many books
'Yesterday, Paul had read many books.'

Structurally, we assume that the syntax looks as in (9), which is a standard representation for V2, with the finite verb in the C head. We have disregarded representing any copies within the *v*P area. We assume that the verb moves from v-to-T-to-C (V-to-*v* movement being obligatory), although the exact way in which this happens (head movement, PF movement, or some other way) does not matter for present purposes.

(9) $[_{CP}$ XP $[_{C}$ V_{fin} $[_{TP}$ $DP_{subject}$ $[_{T}$ ~~V_{fin}~~ $[_{vP}$ ~~$DP_{subject}$~~ *v* $[_{VP}$ ~~V_{fin}~~]]]]]]

Non-subject-initial clauses are relatively frequent in Germanic languages (except English); see e.g., Lightfoot 1999, Yang 2001). In child language, V2 word order is typically attested from the earliest relevant utterances, e.g., Clahsen (1986) and Poeppel & Wexler (1993) for German, Jordens (1990) for Dutch, and Santelmann (1995) and Waldmann (2008) for Swedish. This is also the case for Norwegian, as illustrated in (10a, b) from the Tromsø acquisition corpus. Considering the earliest files of the three children in the corpus (up to age 2;3-2;4), Westergaard (2009b) finds that the vast majority of the children's non-subject-initial declaratives are target-like (96.2%, 707/735). Furthermore, the children's errors are systematic, indicating that their early production is sensitive to information structure: While V2 typically appears with the verb *be* and DP subjects (i.e. informationally new subjects), the non-V2 word order is significantly more likely to appear with pronominal subjects and verbs other than *be* (i.e. informationally given subjects); see Westergaard (2004, 2009b) for further details. A similar pattern is grammatical in Norwegian *wh*-questions (cf. section 3.3).

(10) a. der **er stor stor Ole Brumm**. (Ann.01, age 1;8.20)
there be.PRES big big Ole Brumm
'There is (a) big big Winnie the Pooh.'

b. nå **hørte æ** en bil. (Ole.02, age 1;10.0)
now hear.PAST I a car
'Now I heard a car.'

Exceptions to V2 in this context has been documented in contact varieties (ethnolects) of Norwegian, both old (cf. Sollid 2005) and new ones (cf. Opsahl 2009), but across traditional Norwegian dialects there seems to be no variation for this structure. However, in section 3.1 we discuss a common exception involving a particular initial adverb.

2.2 Subject-initial declaratives

Subject-initial declaratives also display V2 word order, as the finite verb appears preceding adverbs and negation, as illustrated in (11). It is commonly assumed that this should also be analyzed as verb movement to the C-position, and subsequent movement of the subject to SpecCP; see e.g., Vikner (1995).

(11) Peter **kjøpte ikke** ny bil.
Peter bought not new car
'Peter didn't buy a new car.'

However, we follow Travis (1984), Rögnvaldsson & Thráinsson (1990), Zwart (1993, 1997) and Westergaard, Lohndal & Alexiadou (2016) in arguing that the verb moves across adverbs/negation into the inflectional domain (to T), but crucially not into the same position as in non-subject-initial declaratives. The main argument for this is related to economy and the fact that there is no input trigger for movement beyond this domain in acquisition. Thus, we argue that the subject appears in the canonical subject position, which we label SpecTP (see McCloskey 1997 for extensive discussion of canonical subject positions). This means that the negation and other sentence adverbs either appear in a projection between the subject and the finite verb (cf. Cinque 1999) or adjoined to the projection hosting the verb and the subject. We leave the choice of which implementation aside for present purposes, but (12) provides a general structure of subject-initial declaratives.

(12) $[_{TP}\ DP_{subject}\ [_{T}\ T\ [_{vP}\ \sout{DP_{subject}}\ [_{v}\ v\ [_{VP}\ V\ ]]]]]$

Importantly, if (12) is correct, that means that V2 does not involve a single syntactic position for the finite verb in declaratives. Rather, what looks like V2 on the surface may involve different underlying syntactic positions, one above adverbs/negation and another above the subject.

Turning to acquisition, there are ample data showing that children acquire this word order from early on, placing the verb in front of negation and other adverbs, as seen in (13a). The three children in the Tromsø acquisition corpus produce the target-consistent V-Neg/Adv word order in as much as 89.3% (1272/1425) of all subject-initial declaratives (Westergaard 2009b). Examples without verb movement make up 10% (142/1425) and generally have a non-finite verb in the position following Neg/Adv, which means that they correspond to what is often called Optional or Root infinitives in the literature (see e.g., Wexler 1999), illustrated in (13b). According to Westergaard (2009b), these are examples with missing auxiliaries, not unmoved lexical verbs. This means that examples with a finite verb following Neg/Adv are vanishingly rare in the corpus, accounting for only 0.8% (11/1425) of the relevant utterances. Some evidence that the verb does not move all the way to the C-domain in these structures comes from the word order attested in non-V2 constructions; see examples in section 3.5.

(13) a. æ **gjør ikke**. (Ina.09, age 2;2.12)
I do.PRES not
'I'm not doing (it).'
b. Merete **også pusle**. (Ole.07, age 2;1.26)
Merete also puzzle.INF
'Merete (should) also do a puzzle.'

2.3 Wh-*questions*
As mentioned in the Introduction, there is considerable word order variation in *wh*-questions in Norwegian. We discuss this more thoroughly in section 3.3, including the acquisition data. Here we simply show that Norwegian dialects allow and display V2 in both non-subject and subject matrix *wh*-questions, shown in (14)-(15). It is widely assumed that non-subject questions have the same structure as (9) above, i.e. with verb movement to the C-domain. For subject questions such as (15), however, we argue that the verb does not move to the left periphery, again due to economy considerations.

(14) Hva **leste Paul** på mandag?
what read Paul on Monday
'What did Paul read on Monday?'

(15) Hvem spiste kaken?
who ate the.cake
'Who ate the cake?'

Turning to acquisition, we see that children typically acquire target-like V2 word order in *wh*-questions that require this word order, as in (16), which is introduced by a disyllabic *wh*-element. In such contexts, the three children in the Tromsø acquisition corpus produce virtually only target-consistent V2 word order (96.1%, 99/103), with only a handful of examples where the structure is somewhat unclear (cf. Westergaard 2009b).

(16) korfor **får den** ikkje mat? (Ole.16, age 2;8.5)
why get.PRES it not food
'Why doesn't it get any food?'

2.4 Yes/no-*questions*
In *yes/no*-questions, the finite verb appears in the left periphery and all other constituents appear in their canonical position; see (17). Whether or not one assumes that there is a silent question operator to the left of the finite verb, the structure displays the hallmark of a V2 structure – verb movement to the left of the subject – into the C-position, as shown in (18). It is also possible to leave the verb in situ, producing an intonation question, as illustrated in (19).

(17) **Spiser Ola** aldri is?
eats Ola never ice.cream
'Does Ola never eat ice cream?'

(18) [$_{CP}$ Op [$_{C'}$ C [$_{TP}$ $DP_{subject}$ [$_{T}$ T [$_{vP}$ ~~$DP_{subject}$~~ *v* [$_{VP}$ V]]]]]]

(19) %**Ola spiser** aldri is?
Ola eats never ice.cream
'Ola never eats ice cream?'

Given the right context and appropriate prosody, (19) may carry interrogative force. There will nevertheless be a significant meaning difference between (17) and (19): the latter question carries the presupposition that the speaker expects the proposition to be true, whereas the V1 question is neutral in this respect. Our acquisition data show that children acquire *yes/no*-structures very early. In the Tromsø acquisition corpus, children produce three different types of structures, referred to as Types 1, 2 and 3 by Westergaard (2009b). Type 1 has a non-finite verb and an optional subject, illustrated in (20), thus corresponding to the declaratives with an auxiliary missing (cf. section 2.2). This type does not occur in the grammar of adults, except occasionally in child-directed speech (Johannessen 2016). Type 2 is an intonation question, with a finite verb and a declarative structure; shown in (21), while Type 3 *yes/no*-questions display target-consistent inverted word order, illustrated in (22). This final type (Type 3) is attested as much as 77.2% (673/872) in the production of the three children in the Tromsø acquisition corpus, while the intonation questions (Type 2) are attested 8.9% (78/872), which is similar to the proportion of such questions in a sample of the input data (11.0%, 23/210). This means that the children are generally target-consistent in *yes/no*-questions from early on, with some non-finite root clauses (13.9%, 121/872), corresponding to their production of non-finite declaratives (illustrated in 13b above).

(20) **Brumm være** der? (Ole.02, age 1;10.0)
Brumm be.INF there
'(Should) Winnie the Pooh be there?'

(21) **Ann kan** få se? (Ann.09, age 2;2.19)
Ann can get see
'Does Ann get to see?'

(22) **ser** **du** nokka? (Ann.07, age 2;1.7)
see.PRES you something
'Do you see anything?'

Having shown that V2 word order is in place from early on in contexts that require it, we now turn to cases where non-V2 word order is either allowed or required. If the V2 attested in the declaratives and questions discussed in this section were the result of a parameter setting, we would expect to see V2 to the same extent in all contexts. As we show in what follows, this is not the case.

3. Non-V2 word order

3.1 Non-subject-initial declaratives

In section 2.1 we saw that V2 is generally required in non-subject-initial declaratives and that this word order is attested early in child languages. However, there is an important exception to this word order involving the adverb *kanskje* 'maybe'. In all varieties of Norwegian, this adverb may optionally precede both the subject and the verb, yielding non-V2 word order (Westergaard 2008, Bentzen 2014), as illustrated in (23).

(23) Kanskje **bilen leveres** i dag / Kanskje **leveres bilen** i dag.
maybe the.car deliver.PASS in day / maybe deliver.PASS the.car in day
'Maybe the car will be delivered today.'

Based on an investigation of dialect data from more than 100 locations in Norway in the Nordic Syntax Database (Johannessen et al. 2009), Bentzen (2014) documents that Norwegian speakers generally do not allow non-V2 with verb movement to T in main clauses, as illustrated in (24). Thus, in the case of non-V2 word order with this adverb, we argue that the verb does not move to C, but stays in the verbal domain as shown in (25) (*pace* Platzack 1998 and Waldmann 2008 who argue that *kanskje* is a verb located in C in Swedish; see Westergaard 2009b: 42-43 for arguments against such an analysis).

(24) *Kanskje han kommer ikke.
maybe he comes not
'Maybe he's not coming.'

(25) [$_{CP}$ kanskje [$_{C}$ C [$_{TP}$ bilen [$_{T}$ T [$_{vP}$ ~~bilen~~ [$_{v}$ leveres [$_{VP}$ V ~~bilen~~] i dag]]]]]

Children acquiring Norwegian have to learn that the adverb *kanskje* does not always trigger V2. And as illustrated in (26), they are clearly able to do that. In fact, in this case, Westergaard (2009b) has shown that the children in the Tromsø corpus exactly match the adult preferences, in that they produce the same proportion of V2 and non-V2 with this adverb: In a sample of child-directed speech consisting of altogether 1349 utterances, adults produce 95.1% non-V2 (39/41), while the proportion of non-V2 in the total child corpus is 96.4% (27/28). This shows that children are sensitive to fine distinctions in the input from early on, including idiosyncratic lexical properties which may impact word order.

(26) a. kanskje **det var** en anna dag. (Ina.9, age 2;2.12)
maybe it be.PAST an other day
'Maybe it was another day.'
b. kanskje **dem krangla**. (Ole.14, age 2;6.21)
maybe they fight.PAST
'Maybe they were fighting.'

We would also like to mention another construction discussed in Sollid & Eide (2007) and Østbø (2014), which concerns fronted constituents followed by the item *så* 'so' in turn followed by the finite verb. In many Norwegian varieties, conditional clauses and temporal and locative adjuncts in first position can appear in this structure. Consider the following examples from Østbø (op. cit.), which in turn is one of the test sentences for which there are geographically distributed judgments available in the Nordic Syntax Database (Lindstad et al. 2009).

(27) a. **I fjor så leste** vi denne boka mange ganger.
last year so read.PAST we this book many times
'Last year we read this book many times.'
b. I [stedsnavn] så kjenner vi mange mennesker.
in place name so know.pres we many people
'We know many people in [place name].'

Strictly speaking, this is a non-V2 structure, since *så* fills the second position of the clause. There is nevertheless subject/verb inversion, unlike what we see in the *kanskje*-construction. See Salvesen (this volume) for further discussion and analysis and where the finite verb is argued to move to a left peripheral head.

3.2 Subject-initial declaratives

In section 2.2 we saw that the finite verb typically appears in second position, preceding adverbs and negation. However, there are certain constituents that may appear between the subject and the finite verb, yielding non-V2 (Nilsen 2003). These are focus-sensitive adverbs, also called focus particles. The adverbs *bare* 'only, just' and *nesten* 'almost' are most common, although Nilsen also mentions adverbs such as *simpelthen* 'simply' and *utelukkende* 'exclusively' and a few others. It is important to note that there is verb movement in these constructions, since the verb moves past negation (28b), although not to the same position as in either subject-initial or non-subject-initial clauses.

(28) a. Han **nesten drukna**.
he almost drown.PAST
'He almost drowned.'
b. Han **bare svarte** ikke.
he just answered not
'He just didn't answer.'

Westergaard (2009b) provides the structure in (29), where focus-sensitive adverbs are merged in a focus projection. This analysis is compatible with the general argumentation in the present paper, since the position for the verb is an intermediate position relative to non-subject-initial and subject-initial clauses.

(29) [$_{\text{DeclP}}$ Han [$_{\text{FocP}}$ bare [$_{\text{Foc'}}$ smilte [$_{\text{TP}}$ …]]]]

Structures with focus-sensitive adverbs are exceedingly rare, not attested at all in the small adult sample of the Tromsø acquisition corpus referred to above, and attested only 0.07% in the overall input of a sample of child-directed speech consisting of approximately 31,000 utterances (cf. Westergaard 2009b). Nevertheless, the three children produce this non-V2 structure from early on, illustrated in (30), and in the total child corpus of 46,685 utterances, this word order is attested 0.06%, showing that children are quite sensitive to this micro-variation in the input.

(30) a. æ **bare gjør** sånn. (Ina.05, age 2;0.5)
I just do.PRES such
'I am just doing like this.'
b. de **bare datt** av. (Ole.08, age 2;2.12)
they just fall.PAST off
'They just fell off.'

3.3 Wh-*questions in various dialects*
As mentioned above, Norwegian dialects exhibit rich variation when it comes to V2 and non-V2 in *wh*-questions, and the existence of *wh*-questions without verb movement has been documented in a large body of literature (see e.g. Iversen 1918, Elstad 1982, Nordgård 1985, Åfarli 1986, Taraldsen 1986, Lie 1992, Fiva 1996, Nilsen 1996, Westergaard 2003, 2005, 2009a, 2009b, 2017, Westergaard & Vangsnes 2005, Vangsnes 2005, Rognes 2011, Vangsnes & Westergaard 2014, and Westergaard, Vangsnes & Lohndal 2017). We can illustrate this property in main clause questions with negation, a non-subject question in (31a) and a subject question in (31b), where non-V2 word order is realized by the presence of the complementizer *som* in second position.

(31) a. Kem du <*skal> **ikkje <skal>** møte i baren?
who you shall not shall meet in bar.DEF
'Who will you not meet in the bar?'
b. Kem **som** <*er> **ikkje <er>** i baren no?
who SOM is not is in bar.DEF now
'Who's not in the bar now?' (Westergaard, Vangsnes & Lohndal 2017)

In the following we briefly review some of the complex patterns of variation found, drawing on a far more detailed presentation in e.g., Westergaard (2009a) and Westergaard, Vangsnes & Lohndal (2017). In many dialects the length of the *wh*-constituents is a relevant variable as they allow non-V2 only with 'simple', monosyllabic *wh*-constituents. Furthermore, the choice of V2 or non-V2 may be influenced by information structure insofar that new subjects favor V2 and given subjects favor non-V2 when the *wh*-constituent is a non-subject (Vangsnes 2007, Westergaard 2009a). Furthermore, as demonstrated in Westergaard, Vangsnes & Lohndal (2017), the word order in subject and non-subject questions is not necessarily subject to the same conditions, as there are dialects that allow complex *wh*-subjects with non-V2 but only simple *wh*-non-subjects.

The Tromsø dialect serves to illustrate all of these variables. In this dialect complex *wh*-constituents require V2 if they are non-subjects, as illustrated in (32a), but not if they are non-subjects as illustrated in (32b). On the other hand, simple *wh*-constituents allow either V2 or non-V2, depending on whether the subject conveys given or new/focused information. When the word order is V2, the subject is typically realized as a full DP, and the verb is often *be*. When the word order is non-V2, the subject is typically realized as a pronoun, and the verb is normally any other verb than *be*. This variation is illustrated in (33a, b).

(32) a. Korsn bil **kjøpte du**? / *Korsn bil du kjøpte? (Tromsø dialect)

how car bought you / how car you bought
'What kind of car did you buy?

b. Kor mange studenta tar kurse? / Kor mange studenta som tar kurse?
how many students take course.DEF / how many students SOM take course.DEF
'How many students are taking the course?'

(33) a. kor **e** **skoan** **hannes** henne? (INV, file Ole.17)
where are shoe.PL.DEF his LOC
'Where are his shoes?'

b. kor **dem** **e** henne?
where they are LOC
'Where are they?' (Westergaard 2009b)

Other dialects do not distinguish between simple and complex *wh*-constituents with respect to V2. Åfarli (1986) shows that the dialect spoken in parts of Nordmøre (northwestern part of the country) allows non-V2 also with long *wh*-constituents, illustrated in (34), and Nordgård (1985) and Vangsnes (2007) provide data for other (north)western dialects illustrating a similar pattern. Another area where non-V2 word order occurs after complex *wh*-constituents is located in northern Troms (Kåfjord), i.e., northeast of the city Tromsø. Non-V2 in this area is arguably due to language contact with Kven/Finnish and Saami, both non-V2 languages (Nilsen 1996, Sollid 2005, Westergaard 2005, 2017). The authentic example in (35) illustrates non-V2 word order introduced by a complex *wh*-constituent *katti* 'when' (from Westergaard 2017).

(34) Kåles bil **du kjøpte**? (Nordmøre dialect)
how car you bought
'What kind of car did you buy?

(35) å korr fin du va på håre – katti **du har** årrna de*?* (M4) (Kåfjord dialect)
oh how nice you were on hair.DEF – what.time you have fixed it
'Oh, how nice your hair looks – when did you have it done?' (Westergaard 2017)

In terms of syntactic analysis, Westergaard & Vangsnes (2005) and Westergaard (2009a) argue that the distinction between simple and complex *wh*-constituents can be accounted for as follows: Simple *wh*-constituents are heads, while complex *wh*-constituents are phrases. Simple *wh*-constituents can then occupy the position that the verb usually moves to in V2 structures. Westergaard & Vangsnes (2005) and Westergaard (2009a) assume that this is the head of the Interrogative Phrase IntP. A filled head blocks verb movement to that position. In dialects where both V2 and non-V2 are possible in a given structure, information structure determines the word order used (Westergaard 2003, 2009a, b). As mentioned above, when the subject conveys given or accessible information (typically a pronoun, marked [-FOC] here), non-V2 is preferred. If the subject conveys new and/or focused information (marked [+FOC]), V2 is preferred. The V2 structure in (36) shows that the verb moves to a lower functional head in the left periphery. Here we follow Westergaard (2009b) in assuming that this is the head of the Topic Phrase. The structure in (37) illustrates non-V2 word order for *wh*-questions.

(36) [$_{\text{IntP}}$ [$_{\text{Int'}}$ *wh* [$_{\text{TopP}}$ [$_{\text{Top'}}$ *finiteV*$_{[-FOC]}$ … [$_{\text{IP}}$ DP$_{[+FOC]}$ [$_{\text{I'}}$ ~~*finiteV*~~ […]]]]]]]

(37) [IntP [Int' *wh* [TopP DP[-FOC] [Top' *finiteV[-FOC]* … [IP ~~DP[-FOC]~~ [I' *finiteV* […]]]]]]]

Based on this analysis of *wh*-questions, it is clear that their structure in V2 contexts is different from declaratives. This shows that the verb and other constituents do not move to the same positions for all sentence types. Rather, what looks like V2 on the surface (say, a non-subject-initial declarative and a non-subject *wh*-question), are actually not manifestations of the same underlying structure.

This considerable variation means that children are exposed to both V2 and non-V2 in these contexts, and Westergaard (2009a) provides a complete overview of the adult data in the Tromsø acquisition corpus, showing that adults produce somewhat different proportions of the two word orders in *wh*-questions, dependent on even further micro-variation related to individual *wh*-elements. For the sake of brevity and comparison with the other V2/non-V2 contexts, we here only provide quantitative data from the sample of child-directed speech investigated in Westergaard (2009b). In this input sample, subject questions and questions with complex *wh*-elements are quite infrequent, both attested 0.3% (6/1349 and 7/1349), the former requiring non-V2 and the latter V2. There are correspondingly few examples in the child data. Nevertheless, the majority of subject questions (75%, 15/20) show target-consistent non-V2 word order with the obligatory presence of the complementizer *som*, as illustrated in (38), while a few of the early ones appear without *som*. This is argued to be due to *som* being a functional element and thus slightly later acquired. In section 2, we showed that the required V2 word order in questions with complex *wh*-elements is also in place in a target-like manner in the Norwegian child data; cf. example (16) above. This shows that children clearly distinguish between different types of *wh*-questions from the first relevant data attested in the corpus.

(38) a. kem **som kjem** no? (Ann.14, age 2;6.0)
who SOM come.PRES now
'Who is coming now?'

b. ka **som er** der? (Ann.19, age 2;9.17)
what SOM be. PRES there
'What is there?'

Furthermore, young children are able to acquire the V2/non-V2 variation in non-subject questions with short *wh*-elements, producing both word orders in these contexts, illustrated in (39). In the adult sample, there are 176 such examples (13%, 176/1349), 66 with V2 (37.5%) and 110 with non-V2 (62.5%). The three children produce altogether 504 relevant examples, 334 with V2 (66.3%) and 170 (33.7%) with non-V2. However, given the considerable variation across individual adults in the corpus (ranging from 2.5% to 68.4%; cf. Westergaard 2009a), the adult and child data are not directly comparable. More importantly, the children can be shown to match the adult preferences with respect to subject and verb types, producing V2 with full DP subjects and *be* (as in 39a), and non-V2 with pronominal subjects and other verbs (as in (39b).

(39) a. kor **er** **Ann sin** **dukke** hen? (Ann.04, age 1;11.0)
where be.PRES Ann POSS doll LOC
'Where is Ann's doll?'

b. ka **du gjør**? (Ann.10, age 2;3.9)
what you do.PRES
'What are you doing?'

This indicates that children also acquire the information structural patterns described for adults from their earliest production of *wh*-questions. Further examples showing this are found in (40)-(41), where the subject and verb choice do not match the adult preferences. However, in this case, the subject *løva* 'the lion' was mentioned in the immediately preceding discourse, which means that it is treated as given information. The child thus correctly uses non-V2 in this case. In (41), on the other hand, the subject pronoun *han der* 'he there' is focused and the question thus requires V2. This means that the children are not simply copying subject and verb patterns in the input but are sensitive to the information value of the subject, regardless of how it is realized.

(40) ka [/] ka **løva like** å spise mamma? (Ann, 2;6.21)
what what the.lion likes to eat mommie
'Mommie, what does the lion like to eat?'

(41) ka **hete han der**? (Ina, 2;1.23)
what is.called he there
'What is HE called?'

3.4 Exclamatives

Norwegian and North Germanic degree exclamatives are discussed in Delsing (2010), Lohndal (2010), Jónsson (2010), Vangsnes & Abels (2010), and Petersson (2011). Terminology varies a bit, but we may distinguish between nominal, adjectival, and adverbial degree exclamatives on the basis of what is "exclamated", and as shown in (42)-(44), none of the structures display V2 word order.

(42) For noen flotte sko **du har** / *har du! *Nominal*
for some amazing shoes you have / have you
'What amazing shoes you have!'

(43) Så fint **huset deres er** blitt / ***er huset deres** blitt! *Adjectival*
so nice the.house yours is become / is house yours become
'How nice your house has become!'

(44) Som **dere krangler** / ***krangler dere**! *Adverbial*
SOM you quarrel / quarrel you
'You are quarrelling a lot!'

Furthermore, the finite verb appears to the right of sentence adverbs, which indicates that there is no verb movement at all in these cases. As we will see in section 3.5, this is also the word order characteristic of embedded clauses.

(45) For noen flotte sko du **alltid har** / *du **har alltid**!
for some amazing shoes you always have / you have always

'You always have amazing shoes!'

(46) Så fint huset deres **heldigvis er** blitt / ***er heldigvis** blitt!
so nice the.house yours luckily is become / is luckily become
'Your house has luckily become so nice!'

(47) Som dere **virkelig krangler** *krangler virkelig!
SOM you really quarrel
'You are really quarrelling a lot!'

As these examples indicate, Norwegian exclamatives need not involve any (overt) *wh*-item. However, as described in Vangsnes & Abels (2010), this varies both within Norwegian and across North Germanic, and Lohndal (2010) has argued that nominal degree exclamatives contain a silent *wh*-item and thus involve a *what for* structure. The overall picture is that both *wh*-items and demonstrative items appear in exclamatives, sometimes as options and sometimes more regulated by structure, language, dialect or style. Detailing this variation is beyond the scope of the present paper.

Exclamatives are an infrequent clause type, attested only 0.4% (9/1349) in the sample of child-directed speech mentioned above. Correspondingly, there are only a handful of examples of exclamatives in the child data. All of these appear with target-consistent non-V2 word order, illustrated in (48a, b). This provides evidence that children do not overgeneralize verb movement; rather, they acquire V2 and non-V2 based on distinctions between sub-types of clauses.

(48) a. så fint **det var**. (Ina.23, age 2;10.22)
so nice it be.PAST
'How nice it is!'
b. kor store mage **han har**. (Ina.27, age 3;3.18)
where/how big stomach he have.PRES
'What a big stomach he has!'

3.5 Embedded clauses

Finally, we consider embedded clauses. It is well known that most V2 languages are asymmetric, in the sense that main clauses typically exhibit V2 word order, while embedded clauses do not (Holmberg & Platzack 1995, Vikner 1995, and many others). The following examples illustrate this in both embedded declaratives and embedded questions.

(49) Ola **spiser aldri** is.
Ola eats never ice.cream
'Ola never eats ice cream.'

(50) Hun påstod at Ola **aldri spiser** is / *at Ola **spiser aldri** is.
She claimed that Ola never eats ice.cream / that Ola eats never ice.cream
'She claimed that Ola never eats ice cream.'

(51) Hvor mange barn **har hun**?
how many children has she
'How many children does she have?'

(52) De spurte henne hvor mange barn **hun har / ***hvor mange barn **har hun**.
they asked her how many children she has / how many children has she
'They asked her how many children she has.'

We take the standard assumption that the verb in general does not move out of the *v*P in embedded clauses. However, in some cases the verb may move across an adverbial, dependent on a number of factors, such as clause type, adverb type, etc. (see e.g., Bentzen 2005, 2007). A relevant example is provided in (53), which also illustrates that this movement mainly occurs in the complement of bridge verbs, e.g., *say, claim*, etc. (Vikner 1995). There is considerable micro-variation across dialects and individuals, which we will not go into, but refer instead to Julien (2007, this volume), and Wiklund et al. (2009).

(53) Hun sa (at) hun **ikke kommer / (at) hun kommer ikke**.
she said (that) she not comes / that she comes not
'She said that she isn't coming.'

Turning to acquisition, again we only have evidence from the Tromsø dialect (Westergaard 2009b). In the sample of child-directed speech mentioned above (Westergaard 2009b), embedded questions are relatively infrequent, attested 1.6% (34/1349). In the child data, there are altogether 108 examples of embedded questions. All of these have target-consistent non-V2 word order (with the possible exception of one example which may be interpreted as a restart), illustrated by the examples in (54).

(54) a. se her ka **Ina gjør**. (Ina.04, age 1;11.22)
look.IMP here what Ina do.PRES
'Look here what Ina is doing.'

b. se **kem som** kommer. (Ann.19, age 2;9.17)
look.IMP who SOM come.PRES
'Look who is coming.'

c. Ann vet ikke kor **han er** henne. (Ann.09, age 2;2.19)
Ann know.PRES not where he be.PRES LOC
'Ann doesn't know where he is.'

d. du må spørre ka **æ har** i handa? (Ann.20, age 2;10.13)
you must ask what I have in hand.DEF
'You must ask me what I have in my hand.'

In embedded declaratives, on the other hand, we see considerable variation, as is the case also in the adult language. Embedded clauses with adverbs/negation are attested even less than embedded questions in the input: In the sample of child-directed speech, there are only 17 examples (0.8%), 3 of them with verb movement and 14 without. Although there are only 12 relevant examples in the child corpus, we find both Neg-V and V-Neg word order, illustrated in (55)-(56), four of the former and eight of the latter. Thus, the children seem to produce more

verb movement in these embedded structures than adults, also in ungrammatical cases, something which has also been attested for e.g., Swedish (Waldmann 2008, 2014) and Faroese (Heycock, Sorace, Hansson & Wilson 2012). This means that children overgeneralize verb movement across adverbs/negation, but not across the subject (in embedded questions); cf. Westergaard & Bentzen (2007).

(55) a. …som xx <som ikkje> [/] som **ikke vil** xx xx. (Ann.17, age 2;8.4)
…which xx which not which not will xx xx
'... which doesn't want xx.'

b. ikke da [//] at det da **ikke blir** stramt. (Ole.18, age 2;9.15)
not then that it then not become.PRES tight
'... that it doesn't get (too) tight.'

c. bare når dem **ikke hold** på da dette dem xxx. (Ina.27, age 3;3.18)
only when they not hold.PRES on then fall.PRES they xxx
'Only when they are not holding on, then they fall.'
Target: 'Bare når dem ikke holder (fast?), da dætt dem xxx.'

(56) a. han sa han **ville ikke spise** <han> [?]. (Ann.17, age 2;8.4)
he say.PAST he would not eat him
'He said he wouldn't eat him.'
Target: … han ikke ville spise…

b. det er ho mamma som **har også tegna**. (Ina.26, age 3;2.05)
it be.PRES DET mommie who have.PRES also draw.PART
'It's mommie who has also drawn.'
Target: … som også har tegna.

c. han [//] at han **skjønne ikke**. (Ann.10, age 2;3.9)
he that he understand.PRES not
'…he … that he doesn't understand.'
Target: … at han ikke skjønne.

Thus, children overgeneralize *v*-to-T, not V-to-C. Additional evidence for this can be seen in the non-target-consistent example in (57), where the verb has not moved to C; cf. the occasional cases of lack of verb movement mentioned above (e.g., Westergaard 2004). However, the verb **has** moved to T. This verb movement is also visible in the (non-target-consistent) word order in the subject question in (58): While the adult language requires non-V2, the child has produced a word order where the finite verb has moved across negation.

(57) <ogs+>[/] og så du **kan ikke** tegne mer sånn. (Ann.17, age 2;8.4)
and s+…. and so you can not draw more such
'And then you can't draw more like that.'
Target: 'Og så kan du ikke tegne mer sånn.'

(58) kem som **vil ikkje** være ilag med han? (Ina.25, age 3;1.08)
who SOM will not be together with him
'Who doesn't want to be with him?'
Target: Kem som ikkje vil være i lag med han?

Westergaard & Bentzen (2007) argue that the cue for v-to-T movement is stronger and more prevalent in the input to children, due to the high frequency of subject-initial clauses with negation (attested 6.2% in the input sample, 130/1349). This means that children overgeneralize *v*-to-T movement from main to embedded clauses. While (over-)generalization is typically not found across clause types, as we have seen in the previous sections, this particular overgeneralization is possible since this type of verb movement does not involve the C-domain. Data such as these can therefore be used to argue that the verb only moves as high as T also in subject-initial declaratives; cf. section 2.2.

4. Verb Second variation

In sections 2 and 3, we have reviewed a range of examples demonstrating that varieties of Norwegian allow both V2 and non-V2 in a rule-governed fashion. We have also provided evidence that children are able to acquire this variation, irrespective of whether it holds for a distinct clause type or for further micro-variation with respect to information structure or a specific lexical item such as *kanskje* 'maybe'. The resulting picture is one in which V2 needs to be decomposed in several ways (cf. Weerman 1989, Migdalski 2010, Westergaard 2008, 2009a).

This goes against the view of V2 as a (macro-)parameter, which has been assumed for decades in the traditional generative framework. While parameters do not play such an important role in the theory any more, having been replaced by features in the Borer (1984) tradition, parameters are nevertheless standardly referred to in the literature. Parameters were originally proposed in order to account for variation across languages and also to explain rapid and generally error-free L1 acquisition. However, as we show in this paper, cases of micro-variation within a language challenge the parameter view of V2. Furthermore, given the concept of Very Early Parameter Setting (Wexler 1999), we would expect the result of setting the V2 parameter early to be massive overgeneralization of this word order, in contexts where the target language requires non-V2 (e.g., exclamatives, certain *wh*-questions in Norwegian, etc.). One of the strengths of parameters was that they would be blind to the context, so that children would not have to make fine distinctions in their I-language grammars (see Valian 1990, 1991 for a discussion). However, there is considerable evidence that children do not overgeneralize in syntax, but are generally target-consistent from early on in cases of variation, showing clear sensitivity to fine distinctions in both syntax and information structure (see Westergaard 2014 for an overview of various phenomena in Norwegian L1 acquisition). Furthermore, there is considerable evidence that children are conservative learners, typically producing errors of omission rather than commission (Snyder 2007). That is, if they produce non-target-consistent structures at all, they err on the side of caution. Thus, empirical evidence from L1 acquisition cannot be said to support the existence of large-scale parameters.

Roberts (2004) argues for an approach to V2 whereby this word order is due to a generalized EPP feature on the left peripheral head Fin. This EPP feature requires SpecFinP to be filled with a constituent: a phrase, a particle, or an expletive. Such an approach would predict that the verb moves to the same position in all V2 constructions. As we have seen in section 2 and 3, this is not supported by the Norwegian data. Rather, there is a range of different heads which the finite verb may occupy: the base position V/*v*, T, and various heads in the left periphery such as Top

and Foc. Mapping out a complete set of possible heads goes beyond the scope of the present paper, and it is quite likely that different varieties of Norwegian employ different sets of heads.

Holmberg (2015) proposes a different approach to V2 which fits better with the patterns seen in Norwegian. He defines V2 as in (59) (see also Alexiadou & Anagnostopoulou 1998).

(59) a. A functional head in the left periphery attracts the finite verb
b. This functional head wants a constituent moved to its specifier position

This definition does not identify the functional head in question. Holmberg does not discuss variability, although the way the definition is worded leaves open the possibility that this head may vary. If so, this approach would correspond to what we argue in this paper. The second part of (59) specifies that a constituent needs to end up in a specifier, which would require *yes/no*-questions to have an operator in their specifier. The first part of (59) covers part of the variation seen in this chapter: It makes it possible to say that the finite verb moves to different positions and that there is no single head that is responsible for the V2 effect. However, Holmberg's analysis cannot account for cases where there is verb movement to a lower head than the CP-domain (e.g., to the IP-domain, as we have argued to be the case in subject-initial declaratives), nor can (59) account for cases where there is no verb movement at all (e.g., in certain *wh*-questions or exclamatives).

In our view, the idea that V2 word order is the result of one unified phenomenon must be abandoned. Instead, V2 effects are caused by a number of smaller rules in local domains. These rules may vary not just across languages and dialects, but also across clause types or other linguistic contexts. Thus, it is perfectly possible for Norwegian to have (more or less) consistent V2 in declaratives and variable V2 in *wh*-questions, while English is the other way around, with consistent V2 in questions (as subject-auxiliary inversion is of course also a type of V2) and V2 in declaratives only appearing in a few remnant cases. Further micro-variation across Germanic languages may be found in Westergaard (2008). As we have shown in this article, it is also perfectly possible for a language/dialect to have V2 in some contexts and not others, based on very fine distinctions in syntax and information structure. Biberauer & Roberts (2012) account for variation across languages with respect to verb movement by proposing a parameter hierarchy with four levels (macro-, meso-, micro-, and nano-parameters), where V2 in English questions is considered to be a micro-parameter (applying at the level of a linguistic subcategory, auxiliaries), while V2 in a language like German would be considered to be a meso-parameter (applying to the full verbal category in the language). Importantly, in this approach the parameters are not innate, but emerge in the acquisition process.

The micro-cue model of Westergaard (2008, 2009a, b, 2014) accounts for even more fine-grained variation, making distinctions between clause types, verb types, types of initial element, etc. Thus, a speaker of a language may have several V2/non-V2 systems present in their grammars, dependent on linguistic context, e.g., a rule causing V-to-I movement in subject-initial declaratives, a rule causing V-to-C movement in *wh*-questions with phrasal *wh*-elements, and no verb movement rule in exclamatives. The micro-cue model is inspired by Lightfoot's (1999, 2006) cue-based approach to acquisition and change. According to Lightfoot, a cue is *a piece of syntactic structure* provided by UG, which will be triggered by relevant input. These

cues are typically formulated in terms of major categories such as N or V, and they thus make the same predictions as macro-parameters. The cue for V2 syntax, for example, is formulated as in (60), simply specifying that the finite verb must appear in the C-position, in all clauses.

(60) Cue for V2 word order: [$_{CP}$ XP $_{C}$V...] (from Lightfoot 1999)

However, given the micro-variation that we have seen in this article, the structure in (60) would massively overgenerate. Furthermore, it is also attested that children very quickly make the relevant distinctions, producing V2 and non-V2 in appropriate contexts. Therefore, Westergaard has instead formulated *micro-cues,* where the relevant linguistic context is taken into account. Some examples are provided in (61)-(66); see Westergaard (2009a for further details).

(61) Micro-cue for V2 in declaratives: [$_{DeclP}$ XP $_{Decl°}$V]

(62) Micro-cue for V2 in *yes/no*-questions: [$_{PolP}$ $_{Pol°}$V]

(63) Micro-cue for V2 in questions with long *wh*-elements: [$_{IntP}$ XP$_{[+wh]}$ $_{Int°}$V]

(64) Micro-cue for V2 in questions with monosyllabic *wh*-elements:
[$_{IntP}$ $_{Int°}$ *wh* [$_{TopP}$ $_{Top°}$V XP$_{[+FOC]}$]]

(65) Micro-cue for word order in subject-initial declaratives with focus-sensitive adverbs:
[$_{DeclP}$ XP [$_{FocP}$ Foc-Adv $_{Foc°}$[V]]]

Thus, a micro-cue is a piece of abstract syntactic structure in a speaker's I-language grammar. Like the different-size parameters in the Biberauer & Roberts (2012) account, the micro-cues are not themselves provided by UG, but are part of the I-language grammar of a *specific* language, as a result of an interaction of UG, input and so-called third factors in acquisition (e.g., economy). That is, the micro-cues are created in the acquisition process. According to the micro-cue model, the UG component contains some general linguistic knowledge such as categories and constraints, but crucially no parameters. This genetic endowment enables the human brain to parse linguistic input, and according to Westergaard (2014), language acquisition is *learning by parsing* (see also Fodor 1998 and much following work by Fodor and collaborators). As a result of this parsing, the learner acquires a specific language or dialect. Note that this approach contends that verb movement is not triggered by some feature or morphological material in a particular syntactic head, but by a *syntactic configuration* that is the result of parsing. That entails that some syntactic movement is not triggered by a feature as such, but rather by a syntactic configuration. In our view, such an approach is better able to account for the micro-variation attested across languages and dialects with respect to V2 as well as the acquisition data related to this micro-variation. Thus, the approach may also generalize to other cases of movement, demonstrating that we need a more diverse understanding of the possible triggers for syntactic movement.

In sum, we believe that the Norwegian facts, both from variation and acquisition, strongly suggest that V2 cannot be one big rule with consequences for the whole grammar. Instead, V2

effects must be the result of several smaller rules operating in more local domains. In our view, therefore, the V2 phenomenon is better accounted for in terms of micro-parameters or micro-cues (e.g., Biberauer & Roberts 2012, Westergaard 2008, 2009a, b).

The resulting picture of the language faculty is one in which there are no 'big' parameters. Rather, variation is fine-grained and often closely related to the input. Even though V2 seems like a major point of difference between languages and varieties, we have argued that it rather consists of a set of smaller rules that together conspire to yield what we identify as the V2 phenomenon. As we have emphasized above, this does not suggest that UG is empty or that there is no prior structure unique to language. There still have to be constraints on the hypothesis space that the child considers, e.g., in terms of what a possible micro-cue is and in turn what linguistic features are available. The approach in the current chapter and the work it builds on rather re-affirms the close interplay between acquisition and syntactic theory outlined in Chomsky (1965): A syntactic analysis is explanatorily adequate to the extent it accounts for how a child could acquire a given grammatical system. The syntactic structures argued for in this paper are closely informed by empirical patterns in child language acquisition and by considering the properties necessary for the child to acquire precisely these patterns.

The work presented in this chapter has another consequence which is worth highlighting. A detailed theory of syntactic variation is necessary in order to arrive at a detailed and predictive *computational model* of syntactic acquisition of the sort that Pearl (in press) outlines and argues for. However, computational models have generally not considered the kind of fine-grained variation discussed in the present paper (compare the extensive review in Pearl in press). We have argued for micro-cues, or structural triggers, and as such, they ought to provide a natural starting point for extending computational models of syntactic acquisition to dialect variation of the sort discussed in this chapter. That could also show how structural triggering approaches may be extended to data analyzed within a variational learning paradigm (see e.g., Yang 2002, 2004).

5. Concluding remarks

Norwegian dialects display a rich array of variation when it comes to the position of the finite verb. This chapter has provided an overview of this variation and discussed its implications for the analysis of V2. Target-consistent acquisition from early on shows that children are sensitive to this micro-variation, and the typical non-target-consistent production involving lack of verb movement shows the impact of economy in the acquisition process. We have thus argued that V2 is the result of several small rules that conspire to yield structures that on the surface exhibit V2 word order. Furthermore, a number of linguistic contexts do not require verb movement at all. A closer scrutiny of this variation both across and within Norwegian dialects reveals underlying structures where the verb is in different positions in different contexts.

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