

Many Small Catastrophes: Gradualism in a Microparametric Perspective

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4.1 Introduction

In work by David Lightfoot (e.g. 1999, 2006), gradual historical development is often discussed in relation to the concept of catastrophes in language change. According to his cue-based model of acquisition and change, diachronic language development should not be gradual, but abrupt and ‘catastrophic’, reflecting a change in the I-language of different generations of speakers (internalized language, see Chomsky 1986). Nevertheless, we often see gradualism in historical data, i.e. in the E-language (externalized language) produced by various speakers/writers, sometimes spanning several hundred years. This means that many generations of children must have been exposed to optionality in the primary linguistic data (PLD), with differing input frequencies for a particular construction. A possible analysis of gradualism is grammar competition in the minds of speakers, as in e.g. Pintzuk (1991) or Kroch and Taylor (1997). In this paper, I consider another explanation of this within an extension of Lightfoot’s cue-based approach to acquisition and change. Discussing synchronic variation in verb second (V2) word order in *wh*-questions in Norwegian dialects against the background of the loss of V2 in declaratives in the history of English, I argue that gradual development may represent several minor changes in the I-language of speakers, caused by the loss or development of various so-called micro-cues. That is, what looks like gradualism is really the result of many ‘small catastrophes’.

The paper is organized as follows: In the next section I briefly outline Lightfoot’s model of cue-based acquisition and change with respect to the loss of V2 in English. In section 4.3 I show that mixed V2 systems are found also in present-day V2 languages and provide some child data indicating that these mixed systems are acquired early. As a consequence, a model of micro-cues is developed within a Split-CP approach to clause structure. In section 4.4 I investigate present-day microvariation in *wh*-questions in Norwegian dialects, and in section 4.5 I argue that this reflects stages in a diachronic development from V2 to non-V2. Section 4.6 contains a brief summary and conclusion.

4.2 V2 in the history of English and cue-based acquisition and change

According to Lightfoot’s theory of cue-based language acquisition and change, a cue is a piece of structure which is produced in children’s I-language as a result of exposure to certain sentence types in the PLD. In Lightfoot (2006: 86) the cue for V2 syntax is formulated as (1), which is a piece of structure “where a phrasal category occurs in the Specifier of a CP whose head is occupied by a verb.”

(1) ${}_{CP}[XP {}_C V \dots]$

For learnability reasons, Lightfoot argues that there must be a UG requirement that the verb is obligatorily in C in this syntactic configuration, as a child adopting (1) as an optional structure, and as a result producing V2 only sometimes, would need negative evidence (i.e. correction) to acquire the target grammar. And negative evidence is

generally not available to children in the acquisition process. According to this argumentation, true language change should not be gradual, but, in Lightfoot's terminology, 'catastrophic', reflecting I-language differences between generations of individual speakers. That is, a speaker's I-language grammar is either V2 or non-V2, not a mixture of the two word orders.

In Lightfoot (1999) this cue-based approach is used to account for the loss of V2 in English, which is generally argued to have taken place some time during the Middle English (ME) period. But in the history of English both V2 and non-V2 word orders are attested simultaneously for an extended period of time. Basing his account on Kroch and Taylor (1997), Lightfoot (1999: 154ff) argues for the existence of two different dialects, a northern one which was consistently V2 due to influence from Scandinavian (with verb movement to C), and a southern dialect which was not V2 "in the usual sense". Contact between the two dialects resulted in both word orders being attested in the E-language, which means that there was a situation of grammar competition between the southern and the northern dialects, i.e. between a V2 and a non-V2 grammar. The expression of the cue in the PLD has then decreased in frequency and eventually fallen below a critical level for language acquisition, the result being that northern children ignored it and developed a grammar without V2, reflecting an abrupt change in the I-language from one generation to the next.

However, this cannot be the whole story, as the southern dialect also displayed variable V2. This is illustrated by the sentences in (2)-(4), all from the Old English (OE) period.

- (2) Him **geaf** ða se **cync** twa hund gildenra pænenga.
 him gave then the king two hundred golden pennies
 'Then, the king gave him two hundred pence in gold.'
- (3) Hiora untrymnesse **he sceal** ðrowian on his heortan.
 their weakness he shall atone in his heart
 'He shall atone in his heart for their weakness.' (Haeberli 2002: 88-90)
- (4) ... þa **wolde he** hiene selfne on ðæm gefeohte forspillan
 ... then would he himself in the battle destroy
 '... then he wished himself to be killed in the battle.' (Bech 2001: 53)

It is well known that this word order variation is linked to systematic linguistic factors such as different subject types, pronouns being preferred with non-V2 and full DPs with V2, as in (2) and (3). Furthermore, specific initial elements always required V2, e.g. the adverbs *þa/þonne* 'then', illustrated in (4). A common analysis of this (see e.g. van Kemenade 1987, Pintzuk 1991, Kroch and Taylor 1997) is that pronouns are clitics attached to a position above the verb (which moves to I), so that (3) is also an example of V2 (i.e. IP-V2). The elements *þa/þonne* are considered to be operators that attract the verb to a higher position (to C), and the verb may therefore appear in front of a clitic subject, as in (4). However, details aside, it seems clear that both surface orders appear in the E-language, subject to certain linguistically relevant factors. Thus, in Bech (2001) and Westergaard (2005a) it is argued that the variation seen in (2)-(3) is dependent on information structure, non-V2 being chosen when the subject is informationally given, while V2 is preferred when the subject conveys new information. In section 4.4 I show that similar variation is attested in present-day Norwegian.

Assuming that the southern dialect also displays mixed V2, a study of the development from V2 to non-V2 word order in English historical data seems almost perfectly gradual. Table 4.1 presents a selection of data from Bech (2001), focusing on

the word order in non-subject-initial declaratives, i.e. (X)XVS and (X)XSV, as the former structure expresses the cue for V2 in the input to children and the latter constitutes conflicting evidence. Calculating relative percentages, one finds that approximately 70% of the relevant contexts in the OE texts appear with V2, while the frequency decreases to approximately 50% in early ME and 30% in late ME.

Table 4.1: The percentage of V2 in non-subject-initial declaratives across OE and ME, based on 5000 main clauses from 19 text samples (raw data from Bech 2001).

Early/Late OE (900-1150)	Early ME (1150-1350)	Late ME (1350-1480)
71.8% (805/1121)	53.5% (294/550)	31.1% (211/678)

The different percentages in Table 4.1 could simply represent different strengths of two systems, a V2 grammar and a non-V2 grammar in competition. In my view, one would then expect the variation between the two word orders to be random or only related to sociolinguistic or stylistic factors, which we have seen is not the case. Instead, it could therefore be argued that the three stages represent distinct V2 grammars, e.g. a default V2 grammar, a mixed grammar, and a default non-V2 grammar. In the remainder of the paper I consider word order variation in present-day Norwegian dialects, where similar stages can be identified, and I argue that different percentages in production in fact do reflect different I-language systems.

4.3 Other mixed V2 systems and cue-based acquisition in a Split-CP model

In this section I would like to point out that mixed V2 systems are not just a historical phenomenon. In fact, English has not completely lost V2, as present-day English has subject-auxiliary inversion in questions, often referred to as ‘residual V2’ (Rizzi 1996), as well as occasional inversion in declaratives, generally with informationally light verbs, mainly ‘be’ (see e.g. Birner 1995). Mixed V2 is also attested in typical present-day V2 languages. Focusing on a dialect of Norwegian (Tromsø), Westergaard (2007) shows that there are some clause types that require V2, while others either require or permit non-V2. For example, while V2 is obligatory in (non-subject-initial) declaratives, illustrated in (5), a word order without verb movement is found in exclamatives and embedded questions, see (6). Furthermore, this dialect allows both V2 and non-V2 in matrix *wh*-questions, a fact which will be returned to below.

- (5) Denne konserten **likte han** ikke./*Denne konserten han ikke likte.
 this concert liked he not
 ‘This concert he didn’t like.’
- (6) Jeg lurer på [hvilken musikk **han liker**]/[*hvilken musikk liker han].
 I wonder on which music he likes
 ‘I wonder which music he likes.’

The clause types which require V2 vs. non-V2 vary across the family of V2 languages. For example, Danish is different from Norwegian in that it is V2 in certain exclamatives, and according to Biberauer (2002), embedded questions are V2 in modern spoken Afrikaans (MSA). And while standard English is V2 in questions but (generally) not in declaratives, many Norwegian dialects are the other way around, e.g. Nordmøre or Nordreisa (Åfarli 1986, Sollid 2003). This means that the word order for individual clause types must be learned from input (see Westergaard 2007 for further details).

This may be problematic within a model of cue-based acquisition, given the obligatory nature of the cue for V2 as formulated in (1). However, child data from the Tromsø dialect discussed in Westergaard (2003, 2007) show that both word orders are attested early in a target-consistent way in all the different clause types, regardless of input frequencies. For example, children produce V2 in non-subject-initial declaratives and non-V2 in embedded questions, as illustrated in (7) and (8), despite very different input frequencies for these two clause types, non-subject-initial declaratives occurring as often as 13.6% (286/2097) in typical child-directed speech and embedded questions only 1.6% (34/2097), see Westergaard (2007). Furthermore, there is no overgeneralization between clause types.

- (7) så **tegne** æ mamma. (Ina.02, age 1;10.4)
 then draw.INF/PRES I mommie
 ‘Then I draw mommie.’
- (8) Ann vet ikke kor **han er** henne. (Ann.09, age 2;2.19)
 Ann know not where he is LOC
 ‘Ann doesn’t know where he is.’

In order to account for the early and error-free acquisition of word order, Westergaard (2007) extends Lightfoot’s theory of cues to a model of ‘micro-cues’ (see also Lightfoot and Westergaard 2007). This is based on a Split-CP model, originally developed in Westergaard and Vangsnes (2005). What is crucial about this model is that the ForceP of Rizzi (1997) is replaced by a number of different heads reflecting the illocutionary force of the clause; e.g. the head Int(errogative) is present in *wh*-questions, embedded questions are bare WhPs, declaratives Top(ic)Ps and exclamatives ExclPs, etc. This means that each clause type differs from all others in the CP domain. Within this split-CP approach, there are several cues expressing V2 word order. For example, the cue for V2 in *wh*-questions is a structure where a *wh*-element is followed by a finite verb in the head position of the IntP, while the cue for V2 in declaratives is an XP followed by a verb in the TopP. Children speaking standard English will encounter the former in the PLD that they are exposed to, but not the latter, while children growing up in Nordmøre will have evidence for the latter and not the former. Table 4.2 provides examples of four of these micro-cues, for *wh*-questions, declaratives, exclamatives and embedded questions, distinguishing between five different V2 grammars.

Table 4.2: Examples of cues for V2 a split-CP model.

Language \ Cue	IntP[(<i>wh</i>) Int°V..]	TopP[XP Top°V..]	ExclP[XP Excl°V..]	WhP[(XP) Wh°V..]
Stand. Norwegian	+	+	-	-
Certain N dialects	-	+	-	-
Danish	+	+	+	-
Standard English	+	-	-	-
Afrikaans (MSA)	+	-	-	+

According to this model, there is no ‘global’ cue for V2 syntax, but separate micro-cues for each clause type. This means that when children scan the PLD for cues, they only consider particular clause types. Given this selective search for cues, diachronic word order changes should typically affect only one clause type at a time. This means that what we see in the history of English is in fact as expected, i.e. only one of the CP heads is affected by the change, Top° but not Int°. Another example of this is found in

Belfast English, where V2 is being lost in Imperatives while it stays unaffected in other clause types (Henry 1994).

In mixed V2 systems there may also be certain clause types that allow both word orders, depending on even finer micro-cues involving information structure or particular classes of categories. This corresponds to the situation in the history of English illustrated in (2)-(4) above, where both V2 and non-V2 existed simultaneously in declaratives. In Norwegian, this first and foremost concerns *wh*-questions, which are discussed in the next section.

4.4 Microvariation in *wh*-questions in present-day Norwegian dialects

4.4.1 The Tromsø dialect

In many Norwegian dialects there is no strict V2 requirement in *wh*-questions. Vangsnes (2005) identifies several microparameters for different *wh*-grammars across the country, dependent on the length of the *wh*-word (monosyllabic vs. disyllabic) or its function (subject vs. non-subject). It is also argued that the dialect variation represents a diachronic development from V2 to non-V2 (see also Westergaard 2005b). In this paper I identify some further variation, using data from spontaneous speech produced by several adults in an acquisition corpus.¹ This variation is based on the frequency of the two word orders with individual *wh*-elements as well as the information structure patterns involved. This principled variation may reflect further micro-cues, and in the next section I argue that this provides evidence for many small steps in the diachronic process from V2 to non-V2.

In the dialect spoken in Tromsø, there is a word order distinction based on the length of the *wh*-word: While disyllabic *wh*-words and full *wh*-phrases require V2, there is apparent optionality between V2 and non-V2 with the monosyllabic question words *ka*, *kor* and *kem* ('what', 'where' and 'who'), as illustrated in (9) and (10). In certain other dialects, e.g. Nordmøre spoken in the western part of the country (see Åfarli 1986), any type of *wh*-question may appear with non-V2, as illustrated in (11) and (12).

- (9) Ka slags bøker **like du**?/*Ka slags bøker **du like**? (Tromsø)
which kind books like you/
'What kind of books do you like?'
- (10) Ka **like du**?/Ka **du like**?
what like you
'What do you like?'
- (11) Kåin **du like** best?/Kåin **like du** best? (Nordmøre)
who you like best
'Who do you like best?'
- (12) Kåles bil **du kjøpte**?/Kåles bil **kjøpte du**?
which car you bought
'Which car did you buy?' (Åfarli 1986: 98, 100)

In Westergaard (2003) a sample of spontaneous speech from one of the adults in the corpus (speaking the Tromsø dialect) was investigated. This revealed a more or less equal distribution of the two word orders in questions with monosyllabic *wh*-words, 45.3% V2 vs. 54.7% non-V2. Furthermore, the variation displayed clear preference patterns for subject and verb types. While V2 mainly appeared with the verb *være* 'be' and full DP subjects (or the pronoun *det* 'it/that'), non-V2 was clearly preferred with any other verb and pronominal subjects, as illustrated in (13) and (14). My

interpretation of this is that it is related to information structure, V2 being used with informationally new subjects (typically full DPs) and non-V2 with discourse-old subjects (typically pronouns). Note that this is not unlike the patterns found in the historical English data, cf. examples (2) and (3) above. The Tromsø dialect is also similar to OE in that certain initial elements require V2, cf. (4) and (9).

- (13) kor **er skoan** **hannes** henne? (INV, file Ole.17)
 where are shoe.DEF/PL his LOC
 ‘Where are his shoes?’
- (14) kor **du har henta** de der pinnan hen?
 where you have picked.up those there sticks LOC
 ‘Where did you pick up those sticks?’

Syntactically, the word order of the Tromsø dialect may be analyzed in the following way (see Westergaard 2005b): The monosyllabic *wh*-elements have been reanalyzed as heads, according to the Head Preference principle of van Gelderen’s (2004).² This means that they move into the head position of the IntP, preventing the verb from moving and making non-V2 word order possible. When V2 does appear, this is the result of movement to a another CP projection, the lower TopP (see Rizzi 1997, 2001), which attracts informationally light elements (i.e. ‘be’ or pronominal subjects). Thus, an I-language change in the status of the monosyllabic *wh*-words in the Tromsø dialect is masked by verb movement (sometimes) applying to a lower CP head.

4.4.2 Other adult speakers – four different V2 grammars

In this section I investigate the production of all adults in the corpus, six parents and two investigators. All eight speakers live in Tromsø and speak a northern dialect. As we see in Table 4.3, there is great variation among the speakers with respect to the proportion of the two word orders, most speakers producing considerably less V2 than the one originally investigated in Westergaard (2003), approximately 2-30%, and one speaker producing quite a bit more, almost 70%.

Table 4.3: Percentages of V2 in questions with monosyllabic *wh*-words, adult speakers.

Speakers	% V2
INV, Ole.13-22	45.3% (136/300)
INV, Ina.01-27	3.9% (34/873)
MOT, Ina.01-27	29.9% (147/491)
FAT, Ina.01-27	10% (22/219)
MOT, Ann.01.21	14.8% (114/771)
FAT, Ann.01.21	2.5% (3/118)
MOT, Ole.01-22	16.5% (26/158)
FAT, Ole.01-22	68.4% (67/98)

I would argue that what we see here is not just different strengths of two global systems, V2 or non-V2, but three separate grammars that are systematically different from each other, a default V2 grammar, a mixed grammar, and a default non-V2 grammar. What is crucial is that the difference between these grammars is not simply different proportions of V2: In the previous section we saw that there were clear patterns found in the Westergaard (2003) data for subject and verb types used with the two word orders, V2 being preferred when the verb is *være* ‘be’ and the subject a full

DP or the (normally demonstrative) pronoun *det*, and non-V2 when the subject is a personal pronoun and the verb any other verb than ‘be’. Table 4.4 provides the subject and verb choice in the two types of *wh*-question (V2 and non-V2) produced by this speaker (figures from Westergaard 2003), and the preferences clearly show that the two word orders appear in different contexts (figures in bold), indicating a mixed grammar. Table 4.5 provides the subject and verb combinations of one of the speakers producing a predominance of non-V2, the mother in files Ole.01-22. Here we see the same subject and verb preference for V2 as in the mixed grammar, but now all cells are filled for non-V2, showing that this word order may be used with any subject or verb. Note that the preferred subject and verb combination for V2 appears even more often with non-V2 (32 vs. 16), indicating that non-V2 is the default word order in this grammar. Finally, Table 4.6 shows the preferences for the speaker producing a predominance of V2, the father in Ole.01-22, and here the subject and verb combinations for non-V2 are similar to that of the mixed grammar, but now V2 seems to be used with any combination, indicating that this is a default V2 grammar.

Table 4.4: Subjects and verbs in *wh*-questions in the mixed grammar, 45.3% V2.

Subject/Verb Types	V2		Non-V2	
	<i>være</i> ‘be’	Other V	<i>være</i> ‘be’	Other V
Full DP/ <i>det</i>	128	5	27	19
Pronoun	1	2	4	114

Table 4.5: Subject and verbs in *wh*-questions in the default non-V2 grammar, 16.5% V2.

Subject/Verb Types	V2		Non-V2	
	<i>være</i> ‘be’	Other V	<i>være</i> ‘be’	Other V
Full DP/ <i>det</i>	16	5	32	23
Pro	0	5	4	73

Table 4.6: Subject and verbs in *wh*-questions in the default V2 grammar, 68.4% V2.

Subject/Verb Types	V2		Non-V2	
	<i>være</i> ‘be’	Other V	<i>være</i> ‘be’	Other V
Full DP/ <i>det</i>	37	18	2	11
Pronoun	0	12	1	18

Having identified three different systems, we may now describe the syntactic difference between the grammars in the following way: As mentioned above, the mixed grammar has verb movement to the low Top° head in the CP domain, which ensures that there is V2 only when the subject is discourse new. The default non-V2 grammar generally has no verb movement, except in remnant cases involving the verb ‘be’, which is similar to the situation in declaratives in present-day English. Finally, the default V2 grammar generally has verb movement to the Int° head, as in Standard Norwegian.

There is also a further difference between the speakers in the corpus, which makes it possible to identify a fourth V2 grammar. Two of the speakers (Ann’s parents) come from Kåfjord, an area north of Tromsø where there has been extensive language contact with Finnish and Sami, both non-V2 languages. In the Norwegian dialects spoken in this area, non-V2 word order appears also with longer *wh*-elements, illustrated in (15), and this is argued by Sollid (2003) to be a result of this contact situation.

- (15) koffer **du** **går** dit bort? (MOT, file Ann.02) (Kåfjord)
 why you walk there away
 ‘Why are you walking over there?’

Based on these findings, the four different V2 grammars can be characterized as in Table 4.7. This illustrates that different frequencies in production may reflect separate I-language grammars with rule-governed variation.

Table 4.7: Four different V2 grammars in *wh*-questions in North Norwegian dialects.

Grammar 1	Grammar 2	Grammar 3	Grammar 4
Predominantly V2 with short <i>wh</i> (approx. 70%)	Mixed grammar with short <i>wh</i> (approx. 45% V2)	Predominantly non-V2 with short <i>wh</i> (3-29% V2)	Predominantly non-V2 with short <i>wh</i> , spread to long <i>wh</i>
V2 w/all verbs and subjects, non-V2 w/given subjects	V2 w/ <i>be</i> + new subjects, non-V2 w/given subjects	Non-V2 w/all verb and subject types, remnant cases of V2 with <i>be</i>	Non-V2 w/all verb and subject types, remnant cases of V2 with <i>be</i>
(Generally) verb movement to Int°	Verb movement to Top° w/short <i>wh</i>	(Generally) no verb movement w/short <i>wh</i>	(Generally) no verb movement w/short <i>wh</i>

4.4.3 Further micro-cues

A more detailed investigation of the adult data reveals further microvariation and indicates that the development has even more steps than the ones identified so far. This concerns the various types of *wh*-elements, first and foremost a difference between *ka* ‘what’ and the other two monosyllabic question words, as well as a possible difference between the disyllabic question words and the full *wh*-phrases.

Table 4.8 displays the percentages of non-V2 word order with the three monosyllabic question words, showing that there is a clear pattern that non-V2 is preferred more often with the question word *ka* ‘what’ than with the other two.

Table 4.8: Non-V2 word order produced by adult speakers in Norwegian corpus.

Speaker/ <i>wh</i> -word	<i>ka</i> ‘what’	<i>kor</i> ‘where’	<i>kem</i> ‘who’
INV Ole.13-22	68.1% (124/182)	43.3% (29/67)	21.6% (11/51)
INV Ina.01-27	98.5% (589/598)	83.3% (66/79)	93.9% (184/196)
MOT Ina.01-27	79.8% (268/336)	49.2% (29/59)	49.0% (47/96)
FAT Ina.01-27	93.9% (155/165)	63.6% (14/22)	87.5% (28/32)
MOT Ann.01-21	91.3% (481/527)	82.4% (108/131)	60.2% (68/113)
FAT Ann.01-21	98.9% (87/88)	100% (17/17)	84.6% (11/13)
MOT Ole.01-22	87.5% (105/120)	57.1% (12/21)	88.2% (15/17)
FAT Ole.01-22	48.1% (25/52)	18.2% (6/33)	7.1% (1/14)

A closer investigation of the subject and verb types used by the speaker producing the default V2 grammar described in Table 4.6 above, the father in Ole.01-22, reveals that he has a mixed grammar for the question word *ka* ‘what’ (48.1% non-V2), and a default V2 grammar for the other two monosyllabic question words (18.2% and 7.1% respectively). Another speaker, the mother in Ina.01-23, seems to have a default non-V2 grammar with *ka* ‘what’, and a mixed grammar with the other two monosyllabic question words, approximately 80% vs. 50% non-V2. For reasons of space, a detailed overview of this is not included here. This indicates that frequency distinctions *within*

what I called the default V2 and non-V2 grammars above may be due to speakers having different grammars for *ka* and the other two monosyllabic question words. However, it should be noted that some of the variation in Table 4.8 cannot be explained in this way, e.g. the difference between 79.8% and 98.9% non-V2 with *ka*, both considered to be the result of a default non-V2 grammar. Thus, it is possible that at this micro-level one must still accept a certain degree of grammar competition.

In the production of one of the speakers from Kåfjord, there are indications that there is a distinction also at the other end of the scale: While this grammar allows non-V2 with longer *wh*-elements, there is a considerable difference between the monosyllabic and the disyllabic question words, and another distinction between the latter and the full *wh*-phrases (although numbers are relatively small). Thus, while this speaker clearly has a default non-V2 grammar with the monosyllabic question words, she has a default V2 grammar with the longer *wh*-elements, as illustrated in Table 4.9 (see also Westergaard 2005b).

Table 4.9: The percentage of non-V2 across questions with different *wh*-elements produced by MOT Ann.01-21, N=863.

<i>Wh</i> -element	<i>ka</i> ‘what’	<i>kor/kem</i> ‘where/who’	<i>korsen/korfor/katti</i> ‘how, why, when’	Full <i>wh</i> -phrases
% of non-V2	91.3% (481/527)	72.1% (176/244)	20% (9/45)	8.5% (4/47)

4.5 A diachronic scenario

In this section, the differences in frequency for the two word orders in the speakers’ production will be argued to reflect the diachronic development from V2 to non-V2, in that it has affected the *wh*-elements in the order indicated in Table 4.9. The driving force is the Head Preference principle of van Gelderen (2004) mentioned above, which has been used to account for many historical changes from phrase to head, e.g. relative *þat* ‘that’ in English. According to this principle, it is more economical to move as a head than as a phrase. Thus, elements which are heads as well as phrases (e.g. pronouns) should, if possible, not project a phrasal level, and should also preferably move into head positions. For this to be a true diachronic principle, I would argue that it has to reflect preferences for economy in the acquisition process. It has often been suggested that there are principles of economy at work in child language, e.g. economy of structure building, see Clahsen, Eisenbeiss and Vainikka (1994) or Clahsen, Eisenbeiss and Penke (1996). Because of the Head Preference principle, there should be a historical drift towards head status of the *wh*-elements, and this should affect the least complex question words first.

The frequency data indicate that the diachronic change has started with the question word *ka* ‘what’. This is not surprising according to Head Preference, as *ka* is arguably the least complex of all the *wh*-words, both phonologically and compositionally. While *ka* presumably consists of a *wh*-feature only, *kem* ‘who’ and *kor* ‘where’ have more complex structures, including person or place features. This means that *ka* has been affected first, and as a head it moves into the head position that the verb previously moved to (Int°) and prevents V2. This first change in the I-language grammar is masked by verb movement still applying to another head in the CP-domain, the low Top°, which attracts the verb when the subject is informationally new.

The head status of *ka* may then spread to the more complex monosyllabic question words *kor* and *kem*. A factor contributing to this spread may be found in child-directed speech. In Table 4.8 we saw that *ka* is the *wh*-word most frequently used with non-V2.

This is also by far the most frequent *wh*-word in the corpus, accounting for as much as 68.3% (2068/3029) of all questions with monosyllabic *wh*-words, while *kor* ‘where’ is represented 14.2% (429/3029) and *kem* ‘who’ 17.6% (532/3029). This means that, as soon as the first step of the development has taken place, it affects a large proportion of adult production. And as this development spreads in the population, this results in a considerable statistical shift towards non-V2 in the input to children. Thus, Head Preference and frequencies in child-directed speech are factors contributing to the development from a consistent V2 grammar (still present in the standard language) to a mixed V2 grammar (Grammar 2 in Table 4.7).

As shown in section 4.4.1, the choice of the two word orders in the mixed grammar is dependent on patterns of information structure, and over time this may cause what has been called an ‘information structure drift’ (Westergaard 2005a, b). This means that as the mixed grammar spreads, the word order which is linked to informationally given subjects should naturally increase, since subjects generally tend to be given information. In a sample of child-directed speech from the corpus investigated for subject shift constructions (Westergaard, forthcoming), as much as 83.3% of subjects are pronouns (35/42). A similar percentage is found in the corresponding environment in the child data, 89.7% (191/213).³ As it is non-V2 which is linked to discourse-old subjects (often pronouns), this leads to a natural development in the direction of this word order in the E-language in general. Information structure drift thus contributes to a statistical shift in the frequency of the two word orders in the PLD, and ultimately to a development from the mixed V2 grammar (Grammar 2) to a default non-V2 grammar (Grammars 3 and 4).

In Grammar 3 there is still a distinction between monosyllabic and longer *wh*-elements, which must be a relatively stable situation as this is found in a number of Norwegian dialects. However, in certain dialects non-V2 also spreads to questions with disyllabic question words and then finally to full *wh*-phrases (Grammar 4). This may be linked to language contact, as in the Nordreisa/Kåfjord case (Sollid 2003), but as this change has also taken place in other dialect areas, there may be additional causes. One possible candidate is again lack of frequency in the input. A speech sample from three adults in the corpus, investigated in Westergaard (2007), indicates that monosyllabic *wh*-words are much more frequent than longer *wh*-phrases in typical child-directed speech, accounting for 96.2% (176/183). Even though the distinction between short and long *wh*-words may be a natural one (see below), so that children do not necessarily overgeneralize word order from one category to the other, the low frequency may nevertheless make this distinction vulnerable.

In terms of I-language changes, the disyllabic *wh*-elements may be considered to be heads in the new grammar, while this is not possible for full *wh*-phrases. This means that the final stage of the development must be caused by another small I-language catastrophe, viz. the complete loss of verb movement to the Int^o head. However, these catastrophic changes in the internalized grammar of speakers will also be masked by verb movement still occasionally applying to the low Top^o head, which then accounts for the survival of V2 in certain cases.

In this diachronic scenario in which apparent gradualism is considered to be the result of many small changes, there may be a variety of causes for these ‘micro-catastrophes’. These causes may be interrelated and work in the same direction, eventually causing more major catastrophes, but there is nothing in the model that makes this necessary. That is, except for certain general preferences for economy in child language, such as Head Preference, there is not assumed to be any historical drift that spans several centuries, as each generation of children only has access to the immediately preceding stage. This means that change may in principle also be reversed.

Some support that this diachronic scenario is a plausible development can be found in other languages, where similar minor distinctions are syntactically relevant. For example, according to Poletto and Pollock (2004), certain Northern Italian dialects make a distinction between short and long *wh*-elements with respect to so-called doubling configurations, and it is argued that the short ones are *wh*-clitics. There also seems to be a distinction between the word corresponding to ‘what’ and all other *wh*-elements in several Romance languages, e.g. in French, where only the former requires Stylistic Inversion or Subject Clitic Inversion.

Similar evidence is also found in Germanic languages. In Bayer and Brandner (2006), it is shown that there is a gradient distinction between the simplest *wh*-words, some slightly more complex ones and full *wh*-phrases with respect to the ‘doubly filled COMP’ phenomenon in some German dialects, the insertion of *daß* ‘that’ being more acceptable the more complex the *wh*-element is. As for the special status of ‘what’, Bayer (2004) shows that while the Bavarian dialect generally allows doubly filled COMPs, *wos* ‘what’ is different from all other *wh*-elements in that it is completely ungrammatical with *daß* ‘that’, and he suggests that ‘what’ is maximally underspecified and lacks features such as N, Case, etc.

Thus, grammars where there is a separate syntax for certain *wh*-elements compared to others are clearly possible, as these differences presumably refer to relevant and principled distinctions between clitic-like, weak and strong forms (Cardinaletti and Starke 1999). This predicts that these distinctions should be easily learnable by children. And this indeed seems to be the case. In Westergaard (2003), it is shown that the mixed word order found in questions with monosyllabic *wh*-elements in the Tromsø dialect is attested early in child language. Moreover, the child data display the same subject and verb preferences as in adult speech, which suggests an early sensitivity to information structure. A further study of the corpus reveals that questions with the long *wh*-elements, although they appear somewhat later than the short ones, are generally produced only with target-consistent V2. Finally, the children also seem to be sensitive to the frequency differences between *ka* ‘what’ and the other monosyllabic *wh*-elements, producing considerably more non-V2 with this question word. Thus, children are clearly capable of acquiring several different V2 grammars, although the distinctions between them may be vulnerable to change due to factors such as Head Preference and frequency shifts in the input.

6. Summary/conclusion

In this paper I have argued that V2 word order is the result of many micro-cues that involve different clause types or syntactically relevant categories such as subject and verb type or class of the initial element. This means that there are many V2 grammars and that word order variation within the same language does not make it necessary to refer to grammar competition between two global systems. Child language data show that children easily acquire mixed V2 systems, and this is explained in a model where children make a selective search for word order cues in different clause types, simultaneously distinguishing other relevant categories and sub-categories such as clitic-like or strong *wh*-elements. Within this model of micro-cues, language change typically occurs in small steps, reflecting new settings of various microparameters. Investigating microvariation in *wh*-questions in a corpus of spontaneous speech in dialects of Norwegian, I argue that the diachronic development from V2 to non-V2 has started with the least complex *wh*-element, *ka* ‘what’, in accordance with a general tendency for economy in child language (Head Preference). This has then spread to the other monosyllabic *wh*-words, then to the disyllabic ones, and finally to the full *wh*-

phrases. As there are many steps in this development, there may also be a variety of causes, e.g. the frequency of the individual *wh*-elements in child-directed speech. This study shows that by investigating microvariation in historical or present-day data we may be able to identify what looks like gradualism as really a set of ‘micro-catastrophes’.

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¹ The corpus consists of 70 files of spontaneous speech from three children in conversation with their parents or an investigator. For further information on the corpus, see Anderssen (2006).

² The principle is simply formulated as follows (van Gelderen 2004, p. 11):

(i) Head Preference or Spec to Head Principle: Be a head, rather than a phrase.

³ The corresponding figure for objects in environments for object shift in the same sample is 27.3% pronouns (3/11) in the adult data, and only 13.5% (35/259) in the child data.