

## Why the English can only scramble eggs

### 1. AIMS OF THE TALK:

- distinguish several types of verb-movement
- show that the type of object movement available in a particular language, i.e. Scrambling or Object Shift (OS) or no object movement at all, depends on the type(s) of V-movement employed in that language
- show that this analysis confirms the observation that OV-languages have Scrambling while VO-languages have OS or no object movement at all
- show why Scrambling has A'-properties while OS has A-properties

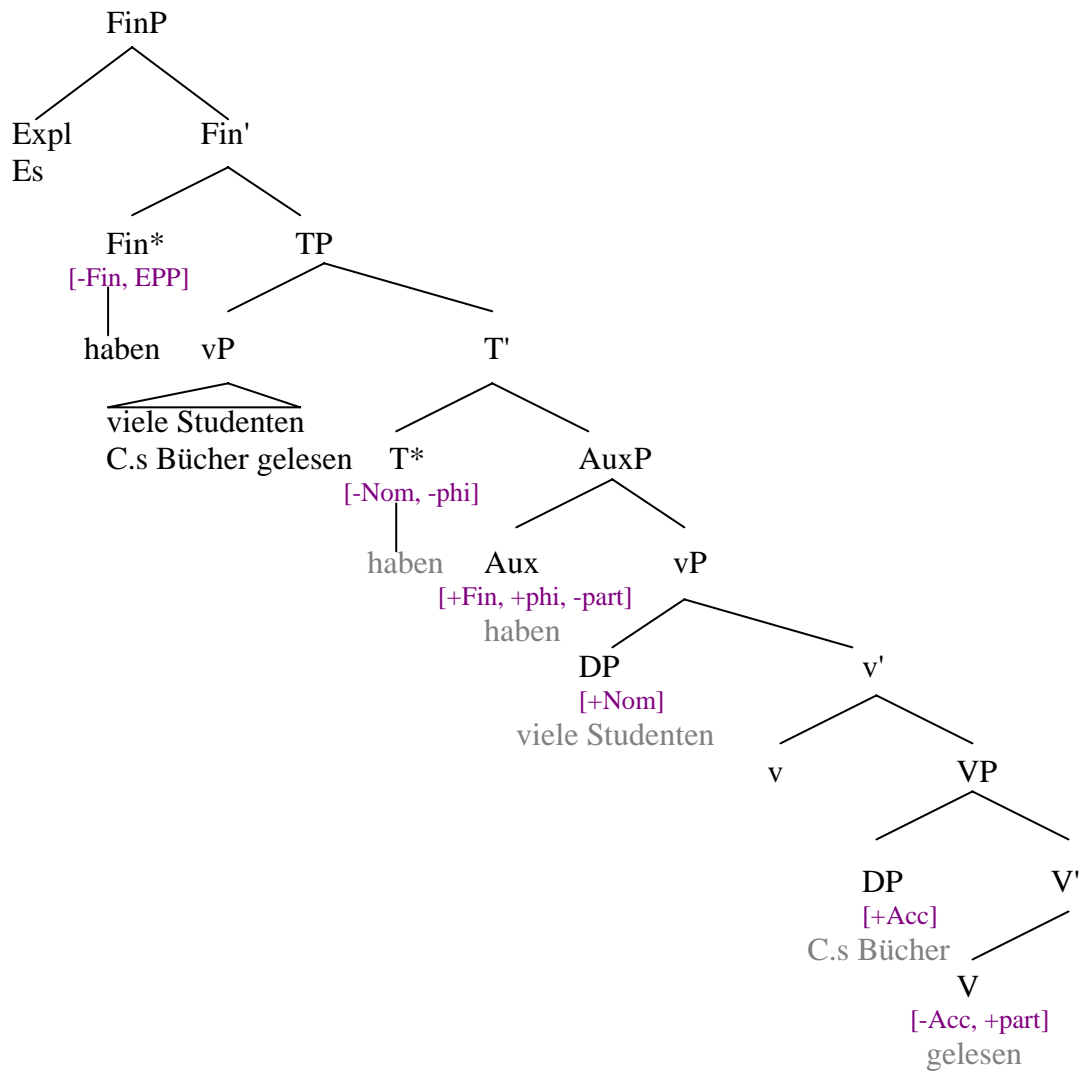
### 2. TYPES OF V-MOVEMENT:

- TECs in German and Icelandic

(1) Es haben viele Studenten Chomskys Bücher gelesen.  
*Expl have many students Chomsky's books read*  
"Many students have read Chomsky's books."

#### The relevant steps of the derivations:

- merge the object DP *Chomskys Bücher* in SpecVP
- merge the subject DP *viele Studenten* in SpecvP
- move the auxiliary *haben* from Aux to T to check phi-features
- **move the complete vP to SpecTP** to check [Nom] and [part]
- move *haben* to Fin to check [Fin]
- merge expletive *es* in SpecFinP to check the EPP



- (2) það hafa margir stúdentar lesið bækur Chomskys.  
*Expl have-pl many students read books Chomsky's*  
 "Many students have read Chomsky's books."

- merge V-stem of "read" in V
- merge object DP *bækur Chomskys* in SpecVP
- **move V-stem to v** (probably to pick up participial morphology)  
 => this short V-movement makes vP-movement impossible (see below)
- merge subject DP *margir stúdentar* in SpecvP
- merge stem of the auxiliary "have" in Aux
- merge finite morphology in T (phi-features get checked)
- raise Aux-stem to T to bind the affix
- **move subject DP to SpecTP** to check [Nom]

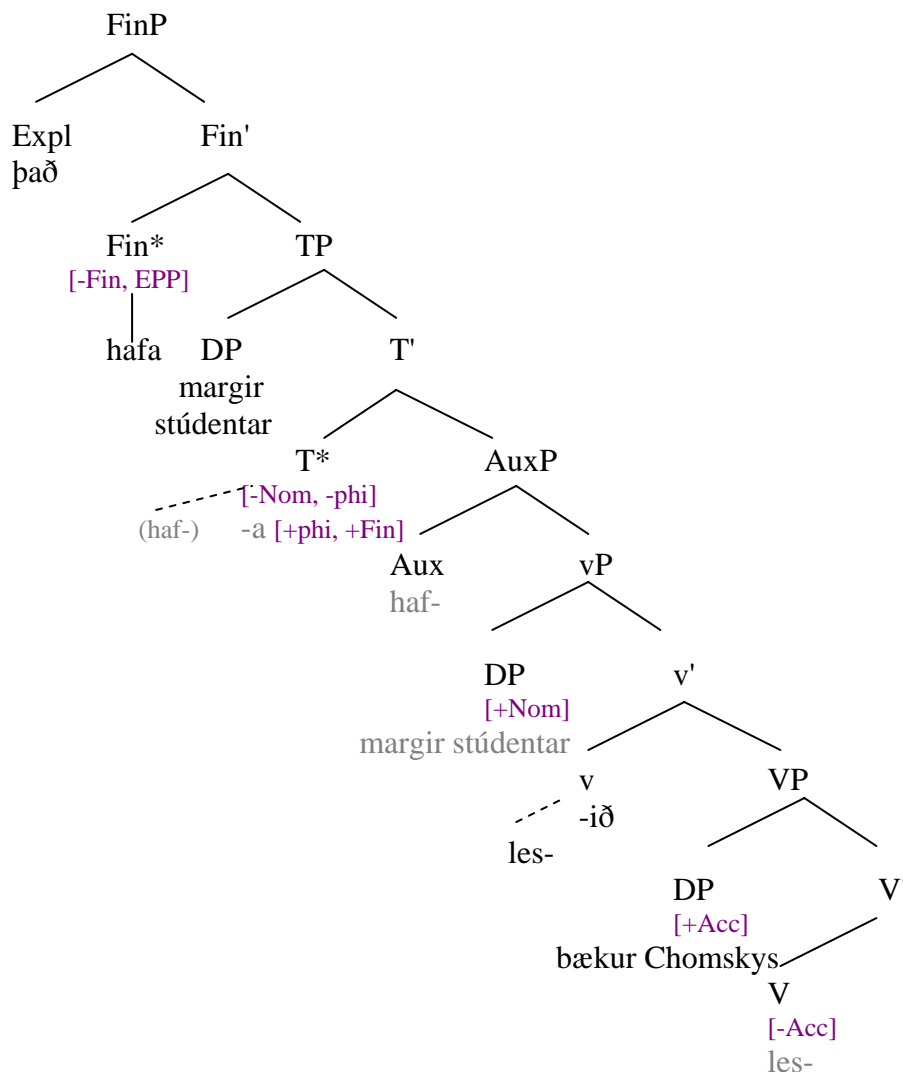
Assuming that the negation *ekki* marks the left edge of vP the ungrammaticality of sentences like (12) shows that vP-movement is not possible if V has moved to v only.

- (3) \**það hafa margir stúdentar lesið bækur Chomskys ekki.*  
*Expl have-pl many students read books Chomsky's not*  
 “Many students have not read Chomsky’s books.”

If only the subject moves to SpecTP the sentence is grammatical.

- (4) *það hafa margir stúdentar ekki lesið bækur Chomskys.*  
*Expl have-pl many students not read books Chomsky's*  
 “Many students have not read Chomsky’s books.”

- move finite auxiliary *hafa* to Fin to check [Fin]
- merge expletive *það* in SpecFinP to satisfy the EPP



- I propose that there are three types of "Verb-movement".

Lexical verbs (finite or non-finite) can  
 either (i) undergo head-movement  
     a. short V-movement from V to v  
     b. V-movement from V through v to T (to ....)  
 or (ii) move with their vP

So lexical verbs can undergo either head-movement or XP-movement (i.e. the verb moves as part of a larger entity). What seems to be impossible is a combination of both – the verb obviously cannot undergo short V-movement and then move with the "modified" vP, as shown in (3) repeated below.

- (3) a. \*það hafa margir stúdentar lesið bækur Chomskys ekki.  
     *Expl have-pl many students read books Chomsky's not*  
     "Many students have not read Chomsky's books."  
 b. \*það hafa [margir stúdentar lesið bækur Chomskys  $t_{Vb}$ ]  $t_{Aux}$  ekki  $t_{VP}$

Long V-movement, on the other hand, can be followed by – in that case remnant – vP-movement.<sup>1</sup>

- (5) a. [Ich glaube nicht,] daß die Studenten Chomskys Artikel lieben.  
     *[I think not] that the students Chomsky's articles love*  
     "[I don't think] that the students like Chomsky's articles."  
 b. ...daß die Studenten [ $t_{Subj}$   $t_{Vb}$  Chomskys Artikel  $t_{Vb}$ ] lieben  $t_{VP}$

These restrictions give us the following options:

- (i) a. **short V-movement** plus movement of the subject (=> transitives, unergatives) or of the derived subject (=> unaccusatives, passives)<sup>2</sup> to SpecTP because vP-movement is impossible  
 => this option is available with both simple and compound tenses

<sup>1</sup> This means that the verb can only undergo either head-movement or XP-movement, not both at the same time. If the verb head-moves to T, however, the remnant vP is free to move as the verb does not join in this XP-movement.

<sup>2</sup> If the derived subject does not move but stays *in situ*, an expletive has to be merged in SpecTP

- b. **V-movement to at least T** plus
- A. **movement of remnant vP** to SpecTP
  - B. movement of the subject or of the derived subject to SpecTP
- => these options are only available with simple tenses
- (ii) **movement of the complete vP** (i.e. with the lexical verb *in situ*) to SpecTP preceded by movement of an auxiliary to T
- => this option is only available with compound tenses

### 3. V-MOVEMENT AND WORD ORDER:

#### VO-order

- VO-languages require that the lexical verb moves to v to check a categorial feature and/or to pick up inflectional morphology
- => this movement results in VO-order
- If we have a **compound tense** the auxiliary will move to T, blocking movement of the lexical verb to this position (**ia**)
- => i.e. the lexical verb cannot leave vP; V-movement is restricted to short V-movement
- => **movement of vP to SpecTP is impossible**
- If we have a **simple tense** the lexical verb can (but need not) move to T and on to higher positions. We get this long V-movement in V2-constructions, for example.
- => If we get V-movement to T (to...), the remnant vP can (but need not) move to SpecTP (**ibA/ibB**)
- => If the verb does not move to T, vP-movement is blocked (**ia**)

#### OV-order

- OV-languages do not require the lexical verb to move to v (exception: movement **through** v to satisfy the HMC)
- => As the base order is retained we get OV-order

- In **compound tenses** the auxiliary will move to T. As the lexical verb hasn't undergone short V-movement **the complete vP can** (must? ⇒ in the OV-lgs I looked at vP-movement is generalised) **move to SpecTP (ii)**
- In **simple tenses** the lexical verb can, e.g. in V2-constructions, undergo **long V-movement**. Long V-movement can (must?) be **followed by remnant vP-movement (ibA)**

#### 4. V-MOVEMENT AND OBJECT MOVEMENT:

Whenever a complete vP or a remnant vP moves to SpecTP we get object movement (this comprises OS and Scrambling). Moreover, object movement is only possible if we get (remnant) vP-movement. This means that I do not consider object movement to be movement of the object out of vP but movement of the object together with the vP.

##### Object Shift (traditional analysis):

- is linked to movement of the lexical verb, i.e. OS is only possible if the lexical verb undergoes V-movement (Holmberg's Generalisation; Holmberg 1986)<sup>3</sup>
- has properties of A-movement (linked to Case assignment, etc.; for an overview see Holmberg 1995, Vikner 1995, Vikner 1999/2000)
- Note: In Icelandic both pronouns and full DPs can undergo OS while in MSc only pronouns can undergo OS.

##### Scrambling (traditional analysis):

- can apply freely
- has properties of A'-movement (licensing of parasitic gaps, not Case-related, etc.; for an overview see Vikner 1999/2000)

##### Object Shift (my analysis):

- **is movement of the (remnant) vP to SpecTP and just to SpecTP**

⇒ OS is only possible if we have

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<sup>3</sup> Note that in some traditional analyses short V-movement does not exist because the base order in the VP is VO, not OV as in my analysis. Therefore the distinction is just V-movement vs. no V-movement, not long V-movement vs. short V-movement vs. no V-movement

EITHER **long V-movement** of the lexical verb [This option is available in both OV- and VO-languages provided they are e.g. V2-languages. However, this option is restricted to simple tenses. **(ibA)**]

OR **no movement of the lexical verb at all** [This option is only available in OV-languages and restricted to compound tenses **(ii)**]

=> OS is not restricted to VO-languages. In fact, it is even more pervasive in OV-languages but there it is mostly invisible.

=> In VO-languages, OS is restricted to simple tenses.

- SpecTP is the successor of SpecIP, therefore an A-position and in addition, the object stays in its base-position, i.e. in an A-position. Hence it is not surprising that OS displays properties of A-movement.

### Scrambling (my analysis):

- is movement of an object out of a vP in SpecTP to a SpecFocP or a SpecTopP in the I-system

=> all Scrambling has to be preceded by an OS operation; or in other words – the first step of Scrambling is OS

- stipulation (⇒ further research is needed here): a language can project Top/FocPs in the I-system only if they can be used without any restrictions

- if Scrambling is movement to a Topic-/Focus-position, the A'-properties of Scrambling follow quite naturally (Rizzi 1997, 2002)

## 5. APPLICATION:

### German and Dutch

German and Dutch choose options (ibA) and (ii), (ibA) with simple tenses and (ii) with compound tenses in both main and embedded clauses.

- (6) a. **Keiner** **verstand** [<sub>VP</sub> t<sub>subj</sub> t<sub>Vb</sub> **DbP** t<sub>Vb</sub>] t<sub>Vb</sub> t<sub>VP</sub>. (ibA)  
*no one understood DbP*
- b. **Keiner** **hat** [<sub>VP</sub> t<sub>subj</sub> **DbP** **verstanden**] t<sub>Aux</sub> t<sub>VP</sub>. (ii)  
*no one has DbP understood*
- c. ... **daß** [<sub>VP</sub> **keiner** t<sub>Vb</sub> **DbP** t<sub>Vb</sub>] **verstand** t<sub>VP</sub>. (ibA)  
 ... *that no one DbP understood*

- d. ... **daß** [<sub>VP</sub> **keiner DbP** **verstanden**] **hat** <sub>t<sub>VP</sub></sub>. (ii)  
 ... *that no one DbP understood has*
- e. ... **daß DbP** [<sub>VP</sub> **keiner** <sub>t<sub>obj</sub></sub> **verstanden**] **hat** <sub>t<sub>VP</sub></sub>. Scrambling  
 ... *that DbP no one understood has*

The fact that we always get vP-movement – be it remnant (ibA) or complete (ii) – accounts for (a) OV-order in embedded clauses<sup>4</sup> and (b) Scrambling.

To be more precise, the fact that we always get vP-movement means that we always get OS and that therefore we get Top/FocPs in the I-system to which the object can subsequently move (if it is associated with the relevant feature), i.e. the object can undergo Scrambling.

### Icelandic

Icelandic chooses options (ibA) with simple tenses and (ia) with compound tenses.

- (7) a. ?**það lesa** [<sub>VP</sub> **margir stúdentar** <sub>t<sub>Vb</sub></sub> **bækur Chomskys** <sub>t<sub>Vb</sub></sub>] <sub>t<sub>Vb</sub></sub> **ekki** <sub>t<sub>VP</sub></sub>.  
*Expl read many students books Chomsky's not*  
 => (ibA) => OS
- b. **það hafa margir stúdentar** <sub>t<sub>Aux</sub></sub> **ekki** [<sub>VP</sub> <sub>t<sub>subj</sub></sub> **lesið bækur Chomskys** <sub>t<sub>Vb</sub></sub>].  
*Expl have many students not read books Chomsky's*  
 => (ia) => no OS

Being a VO-language, Icelandic has short V-movement, which blocks vP-movement unless the verb moves on to fulfil the V2 requirement. Therefore we only get remnant vP-movement, i.e. OS if we have a simple tense. This accounts for the observation that OS depends on V-movement<sup>5</sup>.

As Icelandic has embedded V2, embedded clauses pattern exactly like main clauses, i.e. (ibA) with simple tenses and (ia) with compound tenses.

### Mainland Scandinavian languages

The MSc languages choose (ia) with compound tenses and in embedded clauses with simple tenses as well (because V2 is restricted to main clauses) and (ibB) with simple tenses in main clauses.

<sup>4</sup> The only reason for why main clauses do not have OV-order is the V2 requirement; up to TP the derivations of main and embedded clauses in German and Dutch are identical.

<sup>5</sup> However, as we have seen in (6b) and (6d) OS does not depend on V-movement. OS is available if the verb undergoes long movement or no movement at all.



In the case of (ia) vP-movement is blocked and we cannot get OS.

The case of main clauses which feature a simple tense is a lot trickier because MSc only allows pronouns to undergo OS and I have no explanation for this phenomenon yet. It seems as though MSc does not go for remnant vP-movement in this configuration (although it would be possible) but moves the subject DP to SpecTP  $\Rightarrow$  parallel to all the other derivations in MSc? a special property of T (e.g. unable to look into Spec)?

The simplest explanation, namely that the pronominal object cliticises on the verb and moves with it, does not work because then the verb would have to excorporate at some point.... (otherwise we should get \*DP<sub>subj</sub> Pron<sub>obj</sub> V Neg, contrary to fact).

### English

English uniformly goes for option (ia)  $\Rightarrow$  VO-language, non-V2 language. This means that English has generalised short V-movement. Therefore vP-movement/OS and, as a consequence Scrambling, are impossible.

- (8) A: What did Chomsky scramble?  
 B: Eggs.  
 B: \*The object DP.

### REFERENCES:

- Chomsky, Noam (1999) "Derivation by Phase", ms., MIT.  
 Holmberg, Anders (1986) *Word Order and Syntactic Features in the Scandinavian Languages and English*. Stockholm: Department of General Linguistics, University of Stockholm.  
 Holmberg, Anders & Christer Platzack (1995) *The Role of Inflection in Scandinavian Syntax*. Oxford: OUP.  
 Mohr, Sabine (2002a) "Extending the Extension Condition", poster presented at the TiLT-workshop 2002, Utrecht.  
 Mohr, Sabine (2002b) "Extending the Extension Condition", paper presented at the Universität Stuttgart (lecture series of the Graduiertenkolleg).  
 Mohr, Sabine (2002c) "German, Dutch and Icelandic - so similar and yet so different", paper presented at the Klausurtagung 2002 in the Kleinwalsertal.  
 Rizzi, Luigi (1997) "The Fine Structure of the Left Periphery" in Haegeman, Liliane (ed.) *Elements of Grammar*. Dordrecht: Kluwer, 281-337.  
 Rizzi, Luigi (2002) "Locality and left periphery", ms., University of Siena.  
 Vikner, Sten (1995) *Verb Movement and Expletive Subjects in the Germanic Languages*. New York: OUP.  
 Vikner, Sten (1999/2000), lecture notes of the seminar "Object Shift", University of Stuttgart, WS 1999/2000