

# INVESTIGATING WORD ORDER VARIATION IN THE URALIC LANGUAGES.

## PART II: VERB MOVEMENT

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### 1 Verb movement as a problem

- the problem: **Verb movement**
  - verb movement is common across languages (says the German guy)
  - verb movement is not always straightforwardly detectable
  - verb movement obscures hierarchical relations
  - verb movement is often critical to understanding clause structure (see Estonian from last lesson)
- study aims for today:
  - descriptive insight into *expected* rigid and variable word order in neutral clauses
  - a way of capturing word order variability and rigidity without much of a framework
  - a methodology for diagnosing verb movement

Im richtigen Leben ist Unordnung der Normalfall und entsteht von selbst, während einiger Aufwand an Energie erforderlich ist, um Ordnung herzustellen. Das gilt für Liebesaffären, Linguistikinstitute, mein Büro und vieles andere mehr und steht sicherlich im Zusammenhang zum zweiten Hauptsatz der Thermodynamik.

Bemerkenswerterweise lassen sich Syntaktiker aber nicht von solchen Einsichten leiten, wenn sie sich bemühen, die Anordnung der Konstituenten im deutschen Mittelfeld zu erklären. ((Fanselow 1993: 1))

In real life disorder is the normal case and arises by itself, while some effort of energy is required to establish order. This is true for love affairs, linguistic institutes, my office and much more and is certainly related to the second law of thermodynamics.

Remarkably, however, syntacticians are not guided by such insights when they try to explain the order of constituents in the German Mittelfeld.

- word order variability is the norm, comes about naturally

- word order rigidity comes about via constraints
- advent of Minimalism:
  - Merge is blind: *variability* is the norm, needs no explanation
  - rules restrict the application of Merge (labelling, semantics, feature-checking, ...): *rigidity* needs explanation
- same vein: Neeleman (1994) and later
- **neutral** word order always derived by (1)

(1) Axioms, partly verbatim by Abels (2016), Abels & Neeleman (2012), Neeleman (2015, 2017)

- There are independent merger hierarchies. The order of merge is only restrained within each merger hierarchy.
- Merge is symmetric. Structure building can take place to the left and to the right.
- Neutral orders are base-generated or derived by  $X^+$ -movement.
- $X^+$ -movement is asymmetric: it must be leftward.

## 2 Merger hierarchies

- Neeleman (2015): proposal by Bobaljik (1999):
  - no universal hierarchy of functional projections
  - instead: several hierarchies for elements of the same class
  - these hierarchies can be “interleaved” (Bobaljik 1999: 5) with one another
  - analogy: two decks of cards that shoved together
- ⇒ relative order within each deck is preserved
- illustration of two hierarchies in Dutch in (2):
  - adverbs (**boldface**)
  - arguments (*italics*)
  - (2f): changing within-argument order is degraded
  - (3) shows representation as ‘decks’

(2) Interspersal of adverbs and arguments in Dutch (Neeleman 2015)

- Volgens mij hebben **toen** *de jongens* **snel** *Marie de boeken* gegeven.  
according.to me have then the boys quickly Mary the books given  
‘I think that the boys quickly gave Mary the books at that point.’
- Volgens mij hebben *de jongens* **toen** *Marie* **snel** *de boeken* gegeven.  
according.to me have the boys then Mary quickly the books given
- Volgens mij hebben **toen** *de jongens* *Marie de boeken* **snel** gegeven.  
according.to me have then the boys Mary the books quickly given
- Volgens mij hebben *de jongens* **toen** **snel** *Marie de boeken* gegeven.  
according.to me have the boys then quickly Mary the books given

- e. Volgens mij hebben *de jongens* **toen** *Marie de boeken* **snel** gegeven.  
 according.to me have the boys then Mary the books quickly given
- f. \*Volgens mij hebben **de boeken** *Marie de jongens* gegeven.  
 according.to me have the books Mary the boys given  
 int. 'I think that the boys quickly gave Mary the books at that point.'

(3) Representation as two “decks” with a rigid relative order

$$\left[ \begin{array}{l} \text{de jongens (subject)} \\ \text{Marie (indirect object)} \\ \text{de boeken (direct object)} \end{array} \right] \Leftrightarrow \left[ \begin{array}{l} \text{toen} \\ \text{snel} \end{array} \right]$$

- interspersal is invoked often: Ernst (2002), Haider (2013), Nilsen (2013), Ramchand & Svenonius (2014)
- major problem for cartographic approaches
  - arbitrary number of pre-determined landing sites between heads  $\Rightarrow$  parsimony
  - each head has multiple possible positions, iterations  $\Rightarrow$  self-abolishment
- interspersal also in Uralic
  - most languages: free choice between order of S and higher adverbials like TEMP and LOC
  - exception: languages with limited slots

(4) **Udmurt**

- a. **Маша** *арняпумын Ижкарын яратыса* кырза.  
 Masha weekend.IN Ishkar.IN love.CVB sing.PRS.3SG  
 'Masha sings with love in Izhevsk on the weekend.'
- b. *Арняпумын* **Маша** *Ижкарын яратыса* кырза.  
 weekend.IN Masha Ishkar.IN love.CVB sing.PRS.3SG  
 'Masha sings with love in Izhevsk on the weekend.'
- c. *Арняпумын Ижкарын* **Маша** *яратыса* кырза.  
 weekend.IN Ishkar.IN Masha love.CVB sing.PRS.3SG  
 'Masha sings with love in Izhevsk on the weekend.'

(5) **South Sámi** [C: What happened?/Mij deahpadi?]

- a. **Gaahtoe** *bearjadahken* maanam gåaskoeji.  
 cat.NOM friday.GEN child.ACC wake.PST.3SG  
 'The cat woke the child up on friday.'
- b. *Bearjadahken* **gaahtoe** maanam gåaskoeji.  
 friday.GEN cat.NOM child.ACC wake.PST.3SG  
 'The cat woke the child up on friday.'

- free choice in order of merge
- with respective semantic effects (6)

(6) **Estonian**

- a. Kass oli                    *igal pühapäeval* **kaks last**                    üles äratanud.  
 cat COP.PST.3SG every sunday two child.PART PRT wake.PTCP  
 'The cat woke two children up every sunday.' ( $\forall > 2, *2 > \forall$ )
- b. Kass oli                    **kaks last**                    *igal pühapäeval* üles äratanud.  
 cat COP.PST.3SG two child.PART every sunday PRT wake.PTCP  
 'The cat woke two children up every sunday.' ( $*\forall > 2, 2 > \forall$ )

- the scope of the elements informs you about the hierarchy!
- researching quantifier scope is a royal pain  
 ⇒ using elements with inherently different scope

**3 Symmetric merger and mirror image effects**

- symmetric merger = possible to left and right  
 ⇒ elements from same hierarchy: same relative *internal* order  
 ⇒ different order relative to V  
 ⇒ **mirror image orders**  
 ⇒ V = symmetry axis; **mirror axis** (Jan Koster)
- Dutch: V as a language-internal symmetry axis (7)

## (7) hierarchy of PP merger in Dutch: PP1 &gt; PP2 &gt; PP3 (Neeleman 2017)

- a. **leftward merge**: [ PP3 [ PP2 [ PP1 V ] ] ]
- dat hij [door een stuurfout]<sub>3</sub> [met een knal]<sub>2</sub> [op het hek]<sub>1</sub> strandde  
 that he by a steering-error with a bang on the fence got.stuck  
 'that he got stuck on the fence with a bang because he made a steering error'
- b. **rightward merge**: [ [ [V PP1 ] PP2 ] PP3 ]
- dat hij strandde [op het hek]<sub>1</sub> [met een knal]<sub>2</sub> [door een stuurfout]<sub>3</sub>  
 that he got.stuck on the fence with a bang by a steering-error

- **mirror image effect**: linear order of elements in front of the head is reversed behind the head
- the orders cannot be reversed if one the same side of the head (8)

## (8) hierarchy of PP merger in Dutch: PP1 &gt; PP2 &gt; PP3

- a. **impossible leftward merge**: [ PP1 [ PP2 [ PP3 V ] ] ]
- \*dat hij [op het hek]<sub>1</sub> [met een knal]<sub>2</sub> [door een stuurfout]<sub>3</sub> strandde  
 that he on the fence with a bang by a steering-error got.stuck  
 int. 'that he got stuck on the fence with a bang because he made a steering error'
- b. **impossible rightward merge**: [ [ [V PP3 ] PP2 ] PP1 ]
- \*dat hij strandde [door een stuurfout]<sub>3</sub> [met een knal]<sub>2</sub> [op het hek]<sub>1</sub>  
 that he got.stuck by a steering-error with a bang on the fence

- not every language allows for merger in both directions
- the effect is also visible cross-linguistically!  
 ⇒ in (9) for preverbal adverbials  
 ⇒ when Adv2 Adv1 V is neutral, Adv2 Adv1 V is not neutral

(9) Preverbal rigid order effects

- The cat **now<sub>2</sub>** **completely<sub>1</sub>** finished its nap.
- \*The cat **completely<sub>1</sub>** **now<sub>2</sub>** finished its nap.
- Mandarin Chinese (Huang 1982: 76)

Ta **qunian<sub>2</sub>** **changchang<sub>1</sub>** lai.  
 he last-year often come  
 'He came often last year.'

- Mandarin Chinese (Huang 1982: 76)

\*Ta **changchang<sub>1</sub>** **qunian<sub>2</sub>** lai.  
 he often last-year come  
 '\*Often, he came last year.' [sic]

- Meadow Mari (Elena Vedernikova, p.c.)

Кова **икече<sub>2</sub>** **ялыште<sub>1</sub>** йочалан йомак-влакым ойлыш.  
 grandmother recently village.IN child.DAT poem.PL.ACC read.PST.3SG  
 'Grandmother read poems to a child in the village recently.'

- Meadow Mari (Elena Vedernikova, p.c.)

#Кова **ялыште<sub>1</sub>** **икече<sub>2</sub>** йочалан йомак-влакым ойлыш.  
 grandmother village.IN recently child.DAT poem.PL.ACC read  
 int. 'Grandmother read poems to a child in the village recently.' (not neutral, emphasis on place adverbial)

- Udmurt (Svetlana Edygarova, p.c.)

Коӱыш **толон<sub>3</sub>** **ӱем<sub>2</sub>** **зол<sub>1</sub>** мяуетӱз.  
 cat.NOM yesterday often stout miaow.PST.3SG  
 'The cat miaowed loudly often yesterday.'

- Udmurt (Svetlana Edygarova, p.c.)

\*Коӱыш **ӱем<sub>2</sub>** **толон<sub>3</sub>** **зол<sub>1</sub>** мяуетӱз.  
 cat.NOM often yesterday stout miaow.PST.3SG  
 int. 'The cat miaowed loudly often yesterday.'

- Udmurt (Svetlana Edygarova, p.c.)

\*Коӱыш **зол<sub>1</sub>** **ӱем<sub>2</sub>** **толон<sub>3</sub>** мяуетӱз.  
 cat.NOM stout often yesterday miaow.PST.3SG  
 int. 'The cat miaowed loudly often yesterday.'

- same postverbally: when V Adv1 Adv2 is neutral, V Adv2 Adv1 is not  
 ⇒ right-to-left (inverse) scope behind V (Neeleman & Payne 2020)

(10) postverbal rigid order effects (no data for Komi nor Mordvin, Finnish presented further below)

- a. The cat **now<sub>2</sub> completely<sub>1</sub>** finished its nap.
- b. \*The cat **completely<sub>1</sub> now<sub>2</sub>** finished its nap.
- c. The cat finished its nap **completely<sub>1</sub> now<sub>2</sub>**.
- d. #The cat finished its nap **now<sub>2</sub> completely<sub>1</sub>**. (not neutral)
- e. Thai (Upsorn Tawilapakul, p.c.)

Mɛɛrîi cùt thian **yàaŋtâŋcay<sub>1</sub> mûawannîi<sub>2</sub>**.  
 Mary to.light candle carefully yesterday  
 'Mary lit the candle carefully yesterday.'

- f. Thai (Upsorn Tawilapakul, p.c.)

??/\*Mɛɛrîi cùt thian **mûawannîi<sub>2</sub> yàaŋtâŋcay<sub>1</sub>**.  
 Mary to.light candle yesterday carefully  
 int. 'Mary lit the candle carefully yesterday.'

- Conclusions

- the relative order between adverbials can systematically differ between preverbal and postpostverbal positions
- a merger hierarchy with symmetric merger is a straightforward account

### 3.1 Generalising mirror image effects

- orbit analogy:

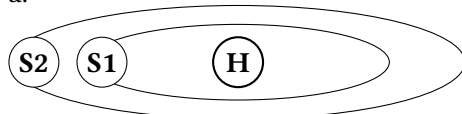
- heads = centre
- dependents = satellites

- satellites:

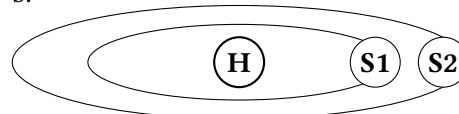
- constant hierarchical relation = constant distance from head
- relative distance between satellites only revealed on same side of head

(11) **Mirror image effect**

a.



b.

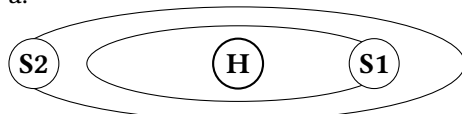


The configuration in (a) maps to the linear order S2 S1 H. The configuration in (b) maps to H S1 S2. In terms of hierarchical order, (a) and (b) are equivalent. The hierarchical structure is evident from the linear order.

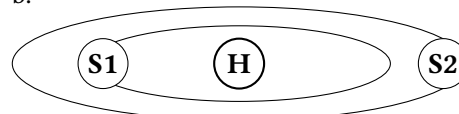
- satellites on opposite side of H  $\Rightarrow$  hierarchy cannot be determined

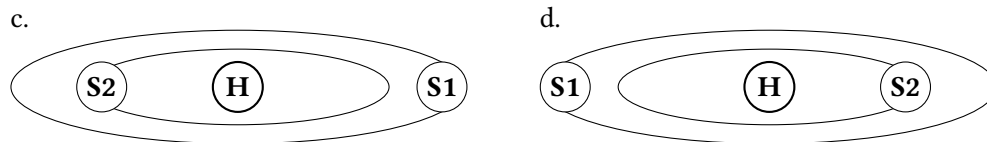
(12)

a.



b.





The configurations in (a,c) map to the linear order S2 H S1. The configurations in (b,d) map to the linear order S1 H S2. In terms of hierarchical order, (a) and (b) are equivalent, but (c) and (d) are not. Therefore, the hierarchical structure *cannot* be inferred from the linear order.

- structural diagnostic following Neeleman (2015)

(13) **The mirror diagnostic**

When two elements of the same category modify a head and they neutrally appear on the same side of the head, the modifier linearly more distant to head is structurally higher than a modifier linearly closer to the head.

- mirror diagnostic backed by data above
- more general formulation of the mirror image data in (14)

(14) **Reduced Universal 20 pattern** (cf. Cinque 2009)

There neutral order lower satellite – higher satellite – V does not exist.

\*S1 S2 V

- straightforward explanation for the mirror universal:  
[ S1 [ S2 V ] ] cannot be base-generated
- hierarchy means embedding means scope: the hierarchically higher element takes scope over the lower element  
⇒ when two elements modify the same semantic domain, their order need not be fixed  
⇒ very often: LOC and TEMP exhibit free variation  
⇒ other frequent case: order change results in change of truth-conditional meaning

## 4 Some relief from my voice: some activity

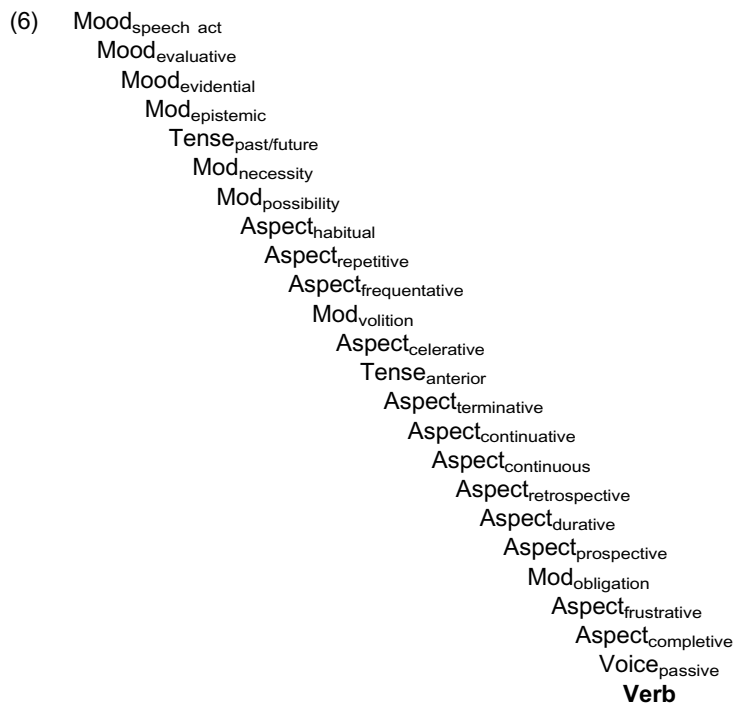
**Task in small groups: Try to find rigidly ordered adverbials!**

1. **The language:** Choose the language you want to investigate together:
  - a group with the Udmurt speaker: do Udmurt
  - a group with a speaker of Hungarian: do Hungarian
  - ...
2. **The satellite class:** Choose a class of adverbials to focus on, e.g.:
  - adverbs
  - PPs
  - case-marked NPs
  - gerunds, converbs, ...
3. **The satellites:** To start with, choose words from the class with inherently higher or lower scope:
  - “low scope:” modifies the verb: manner adverbials

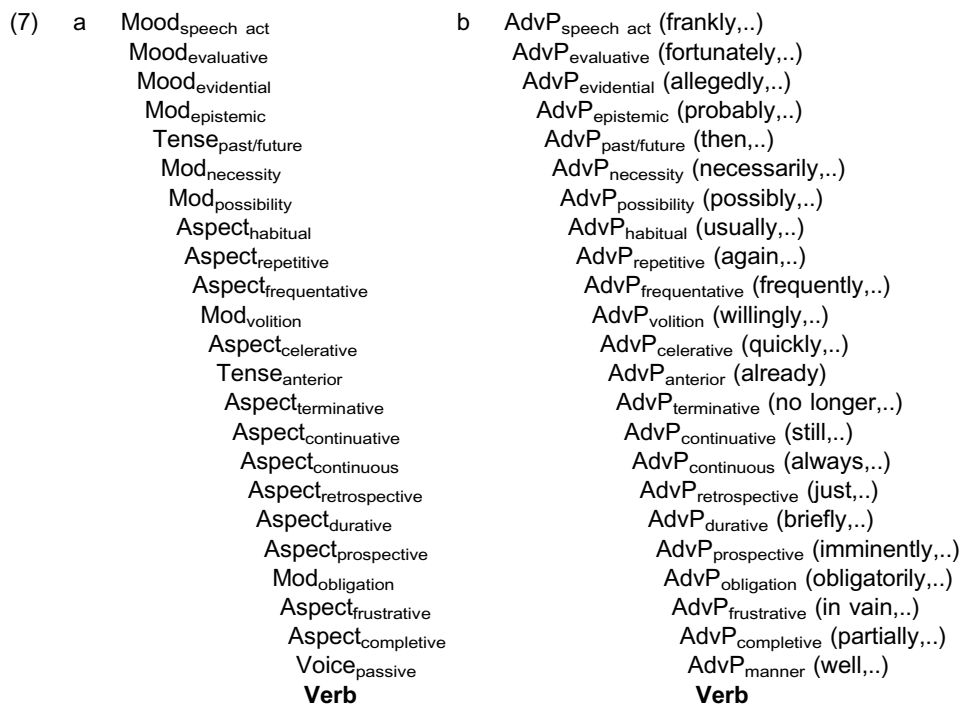
- completely
  - loudly, softly, harshly
  - continuously
  - “mid scope:” modifies the event
    - quantifying the event: often, seldomly, every monday, again
    - instruments: with X, X-com
  - “high scope:” modifies the situation
    - locatives: in X, X-LOC (not goals!)
    - temporals: today, now, earlier, on monday
    - reasons, effects: in vain, due to X
4. **The hard part:** Find two satellites and a verb, such that:
- they make sense together (tip: intransitive verb)
  - the satellites are on the same side of the head
5. **The easier part:** Rearrange the sentences:
- change the order of the adverbials on the same side of V:
    - ⇒ is the order still neutral?
    - ⇒ yes? redo *the hard part* until you find two adverbials where this is not the case
  - place both adverbials on the other side of the verb:
    - ⇒ can that be neutral at all? ⇒ which orders are now neutral?
6. prepare the data as minimal pairs with rough glosses

Inspiration: Cinque’s adverbial hierarchy (see it as a descriptive generalisation)





The second step consisted in the recognition that the various classes of adverbs (more accurately, AdvPs) are also ordered among each other in a syntactic hierarchy, and that this hierarchy turns out to match exactly the hierarchy of Mood, Tense, Modality, Aspect and Voice heads, as can be seen if we juxtapose the two hierarchies:



(8) to (11) show the fixed order of a necessarily incomplete, and small, sample of pairs of adverbs, with examples from English:

## 5 Finally: Verb movement!

- undeniable: verb movement is required in Germanic V2
- one of the first arguments in Dutch: missing mirror image effects (Koster 1974)
- in (15): only one order behind the non-finite verb
- in (16): several orders behind the finite verb

(15) The order V PP3 PP2 PP1 is not permissible without V2 (Barbiers 1995: 102f.)

a. PP<sub>3</sub> PP<sub>2</sub> PP<sub>1</sub> V

Hij is [door 'n stuurfout]<sub>3</sub> [met een knal]<sub>2</sub> [op het hek]<sub>1</sub> gestrand.  
 he is by a steering-error with a bang on the fence stranded  
 'He got stranded on the fence with a bang by a steering error.'

b. V PP<sub>1</sub> PP<sub>2</sub> PP<sub>3</sub>

Hij is gestrand [op het hek]<sub>1</sub> [met een knal]<sub>2</sub> [door 'n stuurfout]<sub>3</sub>  
 he is stranded on the fence with a bang by a steering-error

c. \*PP<sub>1</sub> PP<sub>2</sub> PP<sub>3</sub> V

\*Hij is [op het hek]<sub>1</sub> [met een knal]<sub>2</sub> [door 'n stuurfout]<sub>3</sub> gestrand.  
he is on the fence with a bang by a steering-error stranded

d. \*V PP<sub>3</sub> PP<sub>2</sub> PP<sub>1</sub>

\*Hij is gestrand [door 'n stuurfout]<sub>3</sub> [met een knal]<sub>2</sub> [op het hek]<sub>1</sub>.  
 he is stranded by a steering-error with a bang on the fence

(16) The order V PP<sub>3</sub> PP<sub>2</sub> PP<sub>1</sub> is permissible under V2 (Neeleman 2017: 20)

a. Hij strandde [door een stuurfout]<sub>3</sub> [met een knal]<sub>2</sub> [op het hek]<sub>1</sub>.  
he got.stuck by a steering-error with a bang on the fence  
'He got stuck on the fence with a bang because he made a steering error.'

b. Hij strandde [op het hek]<sub>1</sub> [met een knal]<sub>2</sub> [door een stuurfout]<sub>3</sub>.  
he got.stuck on the fence with a bang by a steering-error

- straightforward explanation: (16) is brought about via verb movement

(17) a. [ V [ ... [ PP3 [ PP2 [ PP1 <V> ] ] ] ] ]

b. [ V [ ... [[[ <V> PP3 ] PP2 ] PP1 ] ] ]

- generally: more freedom behind the head than in front of the head  
 ⇒ the *Universal 20 pattern* (Neeleman 2015)  
 for PPs in (18), generally in (19)
- if you find an exception: report it! It needs to be placed in custody for analysis!

- (18) a. PP3 PP2 PP1 V  
 b. V PP3 PP2 PP1  
 c. \*PP1 PP2 PP3 V  
 d. V PP1 PP2 PP3
- (19) Universal 20 pattern, adapted from Abels (2016), Cinque (2009), Neeleman (2015)
- a. S2 S1 H  
 b. H S2 S1  
 c. \*S1 S2 H  
 d. H S1 S2

- straightforward explanation: **head movement must be leftward**

- (20) a. S2 S1 H – [ S2 [ S1 H ] ]  
 b. H S2 S1 – [ H [ ... [ S2 [ S1 <H> ] ] ] ]  
 c. \*S1 S2 H – \*[[[ <H> S1 ] S2 ] ... ] H ]  
 d. H S1 S2 – [ [ H S1 ] S2 ]

- in a nutshell, the diagnostic in (21) can now be used

(21) Any order H S2 S1, where S2 is a scopally higher element than S1, is derived by head movement.

- Next, let's apply that diagnostic to Finnish postverbal word order variability!

## 6 Finnish postverbal word order variation

- Finnish postverbal field, coined *V-field* by Vilkkuna (1989), allows for word order variation (Boef & Dal Pozzo 2012, Brattico 2018, Manninen 2003, Vilkkuna 1989)
- Finnish verb movement: known since at least Holmberg et al. (1993), other claims also (Holmberg 2000, Holmberg & Nikanne 2002, Huhmarniemi 2012, Manninen 2003: inter alia)
- few studies on Finnish V-field  
 ⇒ we'll look into it!
- Manninen (2003): word order variability for V-field for three adverbials  
 ⇒ every permutation of the three adverbials is *grammatical*
- **but:** Satu Manninen (p.c.): not all orders equally neutral  
 ⇒ data gathering
- only four orders are neutral (22)

- (22) a. Sirkku ampoi Pulmun taitavasti rannalla keskiviikkona.  
 Sirkku shot Pulmu.OBJ skillfully at.beach on.Wednesday  
 V O 1 2 2  
 ‘Sirkku shot Pulmu skillfully at the beach on Wednesday.’ (neutral)
- b. Sirkku ampoi Pulmun taitavasti keskiviikkona rannalla.  
 Sirkku shot Pulmu.OBJ skillfully on.Wednesday at.beach  
 V O 1 2 2
- c. Sirkku ampoi keskiviikkona rannalla taitavasti Pulmun.  
 Sirkku shot on.Wednesday at.beach skillfully Pulmu.OBJ  
 V 2 2 1 O
- d. Sirkku ampoi rannalla keskiviikkona taitavasti Pulmun.  
 Sirkku shot at.beach on.Wednesday skillfully Pulmu.OBJ  
 V 2 2 1 O

- TEMP *keskiviikkona* and LOC *rannalla* are not ordered

- neutral orders straightforwardly derived:

- respect merger hierarchy
- use symmetric merge
- use V movement

- (23) a. structure of (22a)

```
[ ampoi [ ... [ [ [ <ampoi> Pulmun ] taitavasti ] rannalla ] keskiviikkona ] ] ]
[ shot [ ... [ [ [ <shot> Pulmu ] skillfully ] at.beach ] on.Wednesday ] ] ]
[ V [ ... [ [ [ <V> O ] 1 ] 2 ] 2 ] ] ]
```

- b. structure of (22c)

```
[ ampoi [ ... [ keskiviikkona [ rannalla [ taitavasti [ <ampoi> Pulmun ] ] ] ] ] ]
[ shot [ ... [ on.Wednesday [ at.beach [ skillfully [ <shot> Pulmu ] ] ] ] ] ]
[ V [ ... [ 2 [ 2 [ 1 [ <V> O ] ] ] ] ] ]
```

- any other order is **marked**: focus on at least one of the clause-final elements

- (24) a. Sirkku ampoi taitavasti keskiviikkona rannalla PULMUN.  
 Sirkku shot skillfully on.Wednesday at.beach Pulmu.OBJ  
 V 1 2 2 O  
 ‘Sirkku shot PULMU skillfully on Wednesday at the beach.’ (O focus)
- b. Sirkku ampoi Pulmun rannalla taitavasti KESKIVIKKONA.  
 Sirkku shot Pulmu.OBJ at.beach skillfully on.Wednesday  
 V O 2 1 2  
 ‘Sirkku shot Pulmu skillfully at the beach ON WEDNESDAY.’ (time focus)
- c. Sirkku ampoi Pulmun keskiviikkona taitavasti RANNALLA.  
 Sirkku shot Pulmu.OBJ on.Wednesday skillfully at.beach  
 V O 2 1 2  
 ‘Sirkku shot Pulmu skillfully on Wednesday AT THE BEACH.’ (place focus)

- d. Sirkku ampoi keskiviikkona taitavasti RANNALLA PULMUN.  
Sirkku shot on.Wednesday skillfully at.beach Pulmu.OBJ  
V 2 1 2 O

'Sirkku shot PULMU skillfully on Wednesday AT THE BEACH (and not MERJA in the PARK).' (O+Adv focus)

- *per se*: these sentences could be base-generated without violating a merger hierarchy
- e.g. (24a): in (25a)
- since only (22) is neutral:
  - ⇒ word order variability is less than expected
  - ⇒ constraint: O has to be adjacent to V in Finnish (e.g., leftmost case Belk & Neeleman 2017, Janke & Neeleman 2012)
  - ⇒ alternative: merger hierarchy between O and adverbials
- deriving markedness of (24a):
  - a) violation of merger hierarchy
  - b) rightwards phrasal movement (25b, works also better for other examples)

⇒ neutral O is indicative of the base position of V

- (25) a. base-generated structure of (24a)  
 [ V [ ... [ [ [ [ <V> 1 ] 2 ] 2 ] O ] ] ] ]  
 b. phrasal movement of O to the right to derive (24a)  
 [ V [ ... [ [ [ [ [ <V> <O> ] 1 ] 2 ] 2 ] O ] ] ] ]

- **Conclusion:**
  - don't leave it at saying that any order is *grammatical*, say which ones are *neutral*
  - structure can be obscured by head movement, can be inferred from scopal relations
  - here you need at least 3 adverbials

## 7 Udmurt postverbal elements

- data gathered with Svetlana Edygarova (p.c.)
- full focus projection with (26a)
- no difference between (26a) and (26b)  
 $\Rightarrow$  no merger hierarchy between the two elements

(26) neutral orders: 123/213 TEMP – COM – DIR/COM – TEMP – DIR  $\Rightarrow$  full focus projection

- a. [okay without context;  
okay with *what did you do with Masha on weekend?*;  
okay with *where did you go with Masha on the weekend?*]

Мон Машаен арняпумын нүлэскы ветлий.  
1SG.NOM Masha.INSTR weekend.IN forest.ILL go.PST.1SG  
'I went into the forest with Masha on the weekend.'

- b. [okay without context;  
okay with *what did you do with Masha on weekend?*;  
okay with *where did you go with Masha on the weekend?*]

Мон арняпумын Машаен нюлэскы ветлй.  
1SG.NOM weekend.IN Masha.INSTR forest.ILL go.PST.1SG  
'I went into the forest with Masha on the weekend.'

- verb more leftward in (27); still neutral ()
- order of adverbials: S2 (higher adverbial) precedes S1 (lower adverbial)  
⇒ verb movement took place!

- (27) a. Мон ветлй арняпумын Машаен нюлэскы.  
1SG.NOM go.PST.1SG weekend.IN Masha.INSTR forest.ILL  
'I went into the forest with Masha on the weekend.'
- b. Мон ветлй Машаен арняпумын нюлэскы.  
1SG.NOM go.PST.1SG Masha.INSTR weekend.IN forest.ILL

- trying to falsify: are mirror-image orders neutral?
- (28) and (29) shows, they aren't neutral

(28) the mirror image order DIR – COM – TEMP is marked

- a. [without context]

#Мон нюлэскы Машаен арняпумын ветлй.  
1SG.NOM forest.ILL Masha.INSTR weekend.IN go.PST.1SG  
'I went into the forest with Masha ON THE WEEKEND.'

- b. [Context: When did you go ... ? / Ку ... нюлэскы ветлйд?]

Мон нюлэскы Машаен арняпумын ветлй.  
1SG.NOM forest.ILL Masha.INSTR weekend.IN go.PST.1SG  
'I went into the forest with Masha ON THE WEEKEND.'

- c. [answer to *with whom?*]

Мон арняпумын нюлэскы Машаен ветлй.  
1SG.NOM weekend.IN forest.ILL Masha.INSTR go.PST.1SG  
'I went into the forest WITH MASHA on the weekend.'

- d. [answer to *with whom?*]

Мон нюлэскы арняпумын Машаен ветлй.  
1SG.NOM forest.ILL weekend.IN Masha.INSTR go.PST.1SG  
'I went into the forest WITH MASHA on the weekend.'

(29) a. [Answer to *ку (when)*]

Мон ветлй нюлэскы Машаен арняпумын.  
1SG.NOM go.PST.1SG forest.ILL Masha.INSTR weekend.IN  
'I went into the forest with Masha ON THE WEEKEND.'

b. [Answer to кинэн (with whom)]

Мон ветлй арняпумын нюлэскы *Машаен*.  
 1SG.NOM go.PST.1SG weekend.IN forest.ILL Masha.INSTR  
 'I went into the forest on the weekend WITH MASHA.'

- on the surface: clause-final focus, like in Estonian and Russian
- with verb movement: preverbal focus, that is stranded
- **Conclusion:**
  - in contrast to Finnish: no obligatory V displacement
  - variation in verb-placement can be structurally disambiguated: Udmurt isn't suddenly a language with merger to the right

## 8 Final task

**Task in small groups: Try to determine cases of verb movement!**

1. Take your findings from before.
2. Determine:
  - a) Did you find an instance of V S2 S1?
  - b) Does verb movement strike you as a possible explanation?
  - c) Can you try with a third adverbial?
3. Let's discuss your findings together! (Especially Hungarian, it hasn't been done for it afaik)

## 9 General conclusion

- verb movement needs to be accounted for, it conceals the underlying position of V
- languages with obligatory V movement: (afaik)
  - all Sámi languages (South Sámi: only Aux)
  - Finnish
  - Estonian
  - Hungarian
  - very likely: Komi-Zyrian
- languages with optional V movement: (afaik, not verum focus)
  - Udmurt
  - Estonian
  - Meadow Mari (focus driven)
- rather rigid V-finality: good chance to not have to deal with V movement since rightwards head movement hasn't been stipulated yet (afaik, only string-vacuously, ergo, not structure concealing)
- ways to suppress verb movement:

- non-finite/dependent verbs
- less assertive clauses: dependent/subjunctive clauses, conditional clauses
- always distinguish neutral from marked orders
- use lots of constituents
- instead of using quantifier scope interactions, you can use adverbials to diagnose hierarchies (afaik, no QR reported between adverbials)
- all of this is easy to do and straightforward to interpret

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