

**Scrambling the EGG**  
 Handout 3: The “Base-Generators”  
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The “Base-Generators”

- Haider (1984) (book chapter, on German)
- **Neeleman (1994)** (in Corver & Van Riemsdijk 1994 edited volume on Scrambling)
- Haider (1995) (book)
- **Bošković & Takahashi (1998)** (LI article) (JFB response 2001)
- Neeleman & Reinhart (1998) (book chapter)
- Fanselow (2001) (LI article)
- **van Gelderen (2003)** (Leiden dissertation)
- **Bošković (2004)** (LI article) (response to JFB 2001) (JFB response: 2007)
- **Titov (2013)** (proceedings article and UCL dissertation)

1) The Unstated Scrambling Typology: *Head-final languages allow Scrambling; head-initial language don't.* (see Fukui & Saito 1998)

<u>Scrambling languages</u>	<u>Non-scrambling languages</u>
Japanese, Korean, Turkish, Hindi, etc	English, French, Italian, etc
German, Dutch	Swedish

**A. Neeleman 1994** (“Scrambling as a D-structure Phenomenon”) and **Neeleman & Reinhart 1998**, looking at German and Dutch, were responding to the Saito/Mahajan/Webelhuth work, arguing *against* an adjunction (A'-movement) account of Scrambling:

I. an adjunction account predicts the possibility of rightward scrambling (which is out)

- 2) a. dat Jan op zondag het boek leest (Dutch) (✓)  
 that Jan on Sunday the book reads  
 “that Jan reads the book on Sunday”
- b. dat Jan op zondag t<sub>i</sub> leest [**het boek**]<sub>i</sub> (\*Scr to the Rt)  
 that Jan on Sunday reads the book  
 “that Jan reads the book on Sunday”

II. you can't scramble resultatives away from what they modify (as vs WH-mvt):

- 3) a. Dat Jan morgen de deur donkergroen verft  
 that Jan tomorrow the door dark-green paints
- b. [**Welke kleur**]<sub>i</sub> verft<sub>j</sub> Jan de deur morgen t<sub>i</sub> t<sub>j</sub> ? (✓WH-mvt)  
 which color paints Jan the door tomorrow
- c. \*dat Jan **donkergroen** morgen de deur t<sub>i</sub> verft (\*Scr)  
 that Jan dark-green tomorrow the door paints

III. you can't split NPs with Scrambling (as vs Topicalization):

- 4) a. [**Bücher**]<sub>i</sub> hat Hans nicht [viele t<sub>i</sub>] (German) (✓TOP)  
 books has Hans not many  
 “Books, Hans doesn't have too many”
- b. \*Hans hat [**Bücher**]<sub>i</sub> nicht [viele t<sub>i</sub>] (\*Scr)  
 Hans has books not many

IV. there is no LDS (but why shouldn't there be?) (\*LDS)

V. A-movement accounts, (for case to SpecAgrO, Mahajan-style), are also not desirable:

- we expect Relativized Minimality effects (when we derive Obj > Subj or DO > IO)
- we expect only XPs needing case to scramble. But PP arguments also scramble
- more generally, we need AgrOs, but we have no evidence for its head.

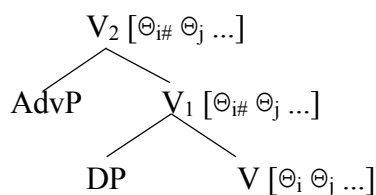
Therefore, Neeleman 1994, Neeleman & Reinhart 1998, propose base-generation (with “flexible  $\theta$ -assignment” for right-headed German/Dutch type languages)

“In German, the order of  $\theta$ -roles does not necessarily translate into c-command relations” (p 419)

- there are rules that link  $\theta$ -roles to cases (pp. 420-422)

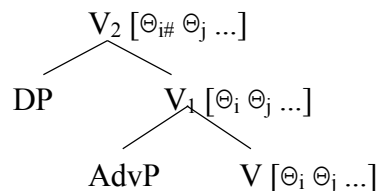
5) Merge and  $\theta$ -assignment with an adverb (deriving non-scrambled and scrambled orders): (from Neeleman & Reinhart 1998)

a. N&R ex (14)



$V_1 = \{V, \{V, DP\}\}$   
 $V_2 = \{V_1 \{v_1, AdvP\}\}$

b. N&R ex (15)



$V_1 = \{V, \{V, AdvP\}\}$   
 $V_2 = \{V_1 \{v_1, DP\}\}$

- this accounts for the difference between English vs. Dutch/German through head-direction

“A base-generation analysis captures the basic properties of scrambling. The structures are derived from the same numeration, and no economy considerations favor one over another in this case. As far as the computational system is concerned, both orders are *acceptable*.”

“ the analysis explains why scrambling is strictly clause-bound, as observed by Ross (1967).

This restriction can now be seen as a direct consequence of the locality of  $\theta$ -role assignment.”

- Problems:
- Scrambling is not limited to V-final languages
  - Scrambling is not always clause bound
  - Scrambling is not only A-movement

### B. “Early Spell Out” (Van Gelderen 2003)

6) Properties of languages with Early Spell-Out (VG, pp. 23-25):

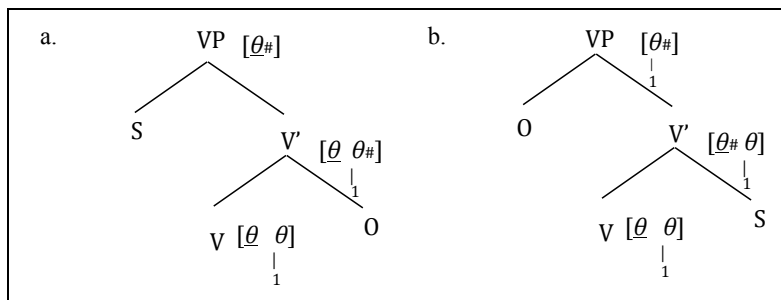
- i. Free Constituent Order: all word orders of major constituents are available
- ii. Islands: “every partial structure will be opaque for extraction”
- iii. Ambiguity: The relative order of two quantifiers will always be ambiguous

- Problems:
- opacity
  - selection
  - constituency

C. Titov (2013) is a modern version of VG. She argues for direct generation of the Russian OVS construction:

“An analysis that sees the Russian OVS as base-generated avoids the locality problem and accounts for the surface scope and the position of the subject with respect to the verb.” (p. 40)

7) a picture of SVO and OVS generation by Titov 2013:



**IB. Problems with direct Base-generation of OVS (5b)** (Titov 2013)

A. In OVS, S is predicted to never c-command (into) O: (... false!)

8) a. **Otličniki** ljubjat **svoix** učitelej SVO (S binds into O)  
 A-students love [self's teachers]<sub>ACC</sub>  
 "A-students love their teachers."

b. **Svoix** učitelej ljubjat **otličniki** OVS (S binds into O)  
 [self's teachers]<sub>ACC</sub> love A-students<sub>NOM</sub>  
 "Their teachers are loved by A-students" (Slioussar 2011: 2056)

B. In OVS, no (traditional) VP constituency is expected (... false!)

9) a. Saša [češet repu] (✓ VP idiom) SVO  
 Sasha<sub>NOM</sub> scratches turnip<sub>ACC</sub>  
 "Sasha is puzzled."

b. Repu [češet \_\_\_] Saša (✓ VP idiom) OVS  
 turnip<sub>ACC</sub> [scratches \_\_\_] Sasha<sub>NOM</sub>  
 "Sasha is puzzled"

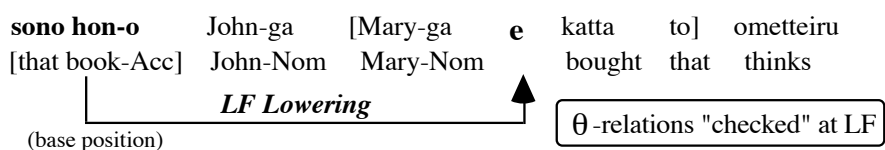
10) Gazetu budet čitat' Saša, a Maša ne budet [čitat' gazetu]  
 paper<sub>ACC</sub> aux read Sasha<sub>NOM</sub> but Masha neg aux [read-paper]  
 "The newspaper Sasha will read but Masha won't [read the newspaper]."

**D. Bošković & Takahashi (1998): Base Generation & Lowering**

"we argue that scrambled elements are base-generated in their surface non-θ-positions and undergo *obligatory LF movement* to the position where they receive θ-roles, which we consider to be formal features capable of driving movement."

- Lowering applies to A'-scrambling. (A-Scrambling is base-generation and *in situ* θ-assignment (allowed by V<sup>0</sup> → T<sup>0</sup> mvt)

11) B&T Lowering approach:



- "θ-roles are weak features in Japanese, whereas they are strong in English."
- "We assume with Saito that the IP-adjoined position can be base-generated in Japanese, but not in English. *We leave it open here what this difference could follow from.*"

• Lowering is possible if it violates no other principles:

- a. Lowering cannot be *overt* (ruled out by the Proper Binding Condition)
- b. the lowered element's base (=scrambled) position cannot be LF relevant
- c. the lowered element cannot be an operator (must bind a variable at LF)
- d. the lowered element does not leave a trace (or form a chain) at LF

• B&T thus eliminate optionality! Last Resort *requires* LF Lowering to check  $\theta$ -features:

“We follow Lasnik & Saito (1992) in assuming that movement does not have to leave a trace when no principle requires it... Then, the LF movement deriving [a scrambled sentence] does not have to leave a trace, rendering the Proper Binding Condition inapplicable.” (B&T, p. 351)

12) Advantages of Base-generation and lowering:

- a. eliminates optionality
- b. gets us Radical Reconstruction
- c. eliminates A vs A'-distinction
- d. allows for multiple Scrambling
- e. accounts for lack of adjunct Scrambling (they show Japanese adjunct LDS is degraded)

13) unacceptable Japanese adjunct scrambling: (from B&T)

- a. Mary-ga [John-ga riyuu-mo naku sono setu-o sinziteiru to] omotteiru.  
Mary-NOM John-NOM reason-even without that theory-ACC believes that thinks
- b. \*Riyuu-mo naku<sub>i</sub> Mary-ga [John-ga t<sub>i</sub> sono setu-o sinziteiru to] omotteiru.

14) Predictions made by B&T:

1. There should be no constraints on the configurational relationship between the surface and  $\theta$ -positions of scrambled elements.
2. Only elements with  $\theta$ -roles should participate in scrambling.
3. Reconstruction never occurs w (English) TOP, WH-mvt
4. Reconstruction effects hold for A'-Scrambling always
5. There should be no interpretive effects associated with surface (scrambled) position.

**Prediction #2:** (Non-arguments never are dislocated)

- 15) a. Ja xoču, čtoby oni bystro dopisali kursovye (Russian)  
I want that they quickly wrote papers  
"I want them to write their papers quickly."
- b. Ja **bystro** xoču, čtoby oni **t** dopisali kursovye  
I quickly want that they write papers  
"I want them to write their papers quickly."

**Prediction #3:** (Reconstruction effects never hold for (English) Topicalization, WH-mvt)  
(see Huang (1993), Heycock (1995) and references therein)

- 16) [That picture of himself<sub>i</sub>]<sub>2</sub>, I know John<sub>i</sub> likes t<sub>2</sub>. (good if reconstructs: Condition A)
- 17) ??[That story about him<sub>i</sub>]<sub>2</sub>, I think John<sub>i</sub> heard t<sub>2</sub>. (out if reconstructs: Condition B)
- 18) \*[That story about John<sub>i</sub>]<sub>2</sub>, I think he<sub>i</sub> heard t<sub>2</sub>. (out if reconstructs: Condition C)

**Prediction #4/5:** (Reconstruction effects hold for Scrambling always; no interpretive effects)

- **Anti-reconstruction:** (Heycock (1995), Huang (1993))

- 19) a. On [sluxi o Marii<sub>i</sub>]<sub>j</sub> xočet, čtoby ona<sub>i</sub> uslyala t<sub>j</sub>  
 he-Top [rumors about Mary<sub>i</sub>] wants that she<sub>i</sub> hear  
 "He wants her<sub>i</sub> to hear rumors about Mary<sub>i</sub>."  
 b. [...nekotorye voprosy Goru<sub>i</sub>]<sub>j</sub> ja xoču, čtoby on<sub>i</sub> srazu zabył t<sub>j</sub>  
 some questions Gore-Dat I want that he immediately forget  
 "I want him<sub>i</sub> to immediately forget some questions to Gore<sub>i</sub>."
- 20) \*On [dovol'nymi rabotoj Marii<sub>i</sub>]<sub>j</sub> sčitaet ee<sub>i</sub> t<sub>j</sub> davno  
 he-Top satisfied-pl w.work Mary-Gen considers her long since  
 "He has considered her<sub>i</sub> satisfied with Mary's<sub>i</sub> work long since."

"fronted phrases that can only be interpreted non-referentially..., in contrast to other fronted phrases, behave with respect to Condition C as though occupying their D-structure positions. Predicates... are a subset of the non-referential expressions." (Heycock (1995), p. 568)

**Prediction #1** (no constraints) Recall Handout 1 (Saito and PBC) (See also Bailyn 2001)

- 21) a. John-ga [Mary-ga sono hon-o yondo to ] itta ] (koto) (Japanese)  
 John-Nom Mary-Nom that book-Acc read COMP said (fact)  
 "John said that Mary read that book."  
 b. \*[Mary-ga \_\_\_<sub>1</sub> yondo to ]<sub>2</sub> sono hon-o<sub>1</sub> [ John-ga [ \_\_\_<sub>2</sub> ] itta ] (koto)  
 Mary-Nom read COMP that book-Acc John-Nom said (fact)  
 "John said that Mary read that book."

"We ignore here the Coordinate Structure Constraint, the Left Branch Condition, and the Specificity Condition, since it is not at all clear that these are movement constraints." ( p. 358)  
 also see appendix on PBC...

**Bošković 2004** "In this reply, I show that Russian examples that Bailyn (2001) uses to argue against Bošković and Takahashi's (1998) analysis of scrambling are irrelevant to the analysis because *they in fact do not involve scrambling*. (Bošković 2004, p. 613)

"A factor that interferes with Bailyn's conclusions regarding Russian scrambling ... is that the language uncontroversially has topicalization as well as focalization, a fact that Bailyn disregards." (p. 618)

"This interpretation is particularly natural in light of the fact that *the undoing property*, ... is taken in a number of works, including BT 1998 ..., to be *the defining and most interesting property of Japanese-style scrambling* (JSS)." (Bošković 2004, p. 618)

→ But some cases DO escape WH-islands, and for Bošković those ARE JSS even in Russian:

- 22) a. \*Kto ty videl [kogda [ \_\_\_ pod'jezžal ] ] ? (\*WH)  
 Who<sub>NOM</sub> you saw when \_\_\_ came  
 "Who did you see when (he) was arriving?" (M&S p. 467)  
 b. Ty [ doktor [ videl [ kogda [ \_\_\_ pod'jezžal ] ] ] ? (√ Scr)  
 you doctor<sub>NOM</sub> saw when \_\_\_ was arriving  
 "Did you see when the doctor was arriving?" (M&S p. 468)

- (22) is JSS in Russian according to Bošković. (they escape islands, the other defining property) (Top and Foc would not have this effect, as "real" movement)

Bailyn (2007): Russian JSS sentences should show low scope (like Japanese scrambling cases):

- 20) Ty **každyju devušku<sub>i</sub>** videl kogda  
 you [every girl]-Acc saw when  
 [ kakoj-to mal'čik celoval t<sub>i</sub> ]?  
 some boy-Nom kissed  
 "Did you see when some boy kissed **every girl**?"  
 i) \* $\exists x \forall y$  ii)  $\forall y \exists x$

“In (20), an embedded quantifier escapes a WH-island, but has surface scope. If the undoing property is the diagnostic, then (20) must be overt movement. If escaping islands is the diagnostic, then (20) must be non-movement (JSS). B’s account has achieved a paradox. (Bailyn 2007: p 12)

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Appendix on BT answer to constraints evidence:

ON PBC: (i) \* $[_{IP}[_{CP}$  Mary-ga  $e_i$  katta to] $_j$   $[_{IP}$  sono hon-o $_i$   $[_{IP}$  John-ga  $e_j$  itta]]] (koto).  
 Mary-NOM bought that that book-ACC John-NOM said fact  
 ‘Lit.: That Mary bought, that book, John said.’

“However, Saito (1989, 1992), who proposed the PBC analysis of (i), points out that under this analysis it is crucial to apply the PBC *at S-Structure*, since after scrambling is undone in LF, (i) no longer violates it. The PBC analysis is therefore incompatible with the Minimalist Program, which has no place for S-Structure conditions. Furthermore, assuming that the PBC applies at S-Structure is empirically untenable owing to well-known counterexamples like remnant topicalization in German.... I conclude therefore that the PBC analysis of (i) is untenable both theoretically and empirically. (Bošković 2004, p. 617)

Constraints: (CSC, adjunct islands, etc)

“BT focus on RM islands, which can be considered well understood in the current framework, and stay away from islands that because of their ill-understood nature cannot be used to tease apart the overt movement analysis and BT’s analysis of scrambling. Consider, for example, the Adjunct Condition (AC). In the current framework, it is not at all clear what is responsible for the descriptive generalization that crossing an adjunct boundary results in degradation. Note that under both the overt movement analysis and BT’s analysis, scrambling ‘out of’ adjuncts involves movement crossing an adjunct boundary: under the former analysis, the crossing takes place during raising, and under the latter analysis, during lowering. To determine whether or not this should make a difference, we need to understand the nature of the AC better. If the very act of crossing an adjunct boundary is what leads to degradation, then we might expect to get AC effects with scrambling under both analyses. (p. 620)

- Bailyn, JF (2001) "On Scrambling: A reply to Bošković & Takahashi" (*Linguistic Inquiry* 32)
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