

# 1 INTRODUCTION

In Russian, sub-extraction is frequently required to respect the base order of the constituents of the nominal phrase. We argue that this generalization indicates that Russian nominal phrases are phases which are subject to Cyclic Linearization and *order preservation* (Fox & Pesetsky 2005, a.o.)

## 2 THE PUZZLE

- Here we focus on left branch extraction (LBE) of constituents originating at the left edge of the nominal phrase (demonstratives, adjectives, possessors, etc.).
- In Russian, demonstratives typically precede adjectives (1a), and while demonstratives can always undergo LBE (1b), an adjective cannot undergo LBE across a demonstrative (1c) unless the demonstrative also moves from NP, and lands above the extracted adjective (1d):

- (1) a. [ètogo **bol'sogo** kota / \* **bol'sogo** ètogo kota]  
           this   big       cat           big       this   cat  
           'This big cat.' (*DEM* < *ADJ*)  
   b. ètogo<sub>k</sub> ja videl [<sub>t<sub>k</sub></sub> **bol'sogo** kota]  
       this   I saw   big       cat  
       'I saw this big cat.' (*LBE* of *DEM*)
- c. \***bol'sogoj** ja videl [ètogo t<sub>j</sub> kota]  
           big       I saw   this   cat  
           'I saw this big cat.' (*LBE* of *ADJ* over *DEM*)  
   d. ètogo<sub>k</sub> **bol'sogoj** ja videl [<sub>t<sub>k</sub></sub> t<sub>j</sub> kota]  
       this   big       I saw   cat  
       'I saw this big cat.' (*LBE* of *DEM* and *ADJ*)

- Since adjective LBE is normally available (2a), the restriction in (1c/d) is puzzling. Further, a sentence like (1d) is unacceptable if the demonstrative moves to a position below the extracted adjective (2b), rather than above it:

- (2) a. **bol'sogo<sub>j</sub>** ja videl [<sub>t<sub>j</sub></sub> kota]  
big I saw cat  
'I saw a big cat' (Typical *ADJ LBE*)
- b. \***bol'sogo<sub>j</sub>** ètogo<sub>k</sub> ja videl [<sub>t<sub>k</sub></sub> <sub>t<sub>j</sub></sub> kota]  
big this I saw cat  
'I saw this big cat.' (Flipped *LBE*)

- The preservation of **ADJ** < **DEM** order also holds when their extractions target separate positions:

- (3) ètogo<sub>k</sub> ja dumaju **bol'sogo**<sub>j</sub> ty videl *t<sub>k</sub> t<sub>j</sub>* kota  
 this I think big you saw cat  
 'I think you saw this big cat.'
- (4) \***bol'sogo**<sub>j</sub> ja dumaju ètogo<sub>k</sub> ty videl *t<sub>k</sub> t<sub>j</sub>* kota  
 big I think this you saw cat  
 'I think you saw this big cat.'

### 3 THE THEORY

- Our account has three components:

#1 Cyclic Linearization: Spell-out linearizes entire phases at once, and the relative order of a phase's contents must be preserved for the rest of the derivation (Fox & Pesetsky 2005, a.m.o.).

- (5) a.  $^*[\text{YP} \overset{\beta}{\uparrow} [\text{XP}_{[\text{PHASE}]} \alpha \overset{\beta}{\downarrow} ]]$                       b.  $\checkmark[\text{YP} \overset{\alpha}{\uparrow} \overset{\beta}{\uparrow} [\text{XP}_{[\text{PHASE}]} \alpha \overset{\beta}{\downarrow} ]]$

#2 The nominal phrase is a phase, and hence, a domain to which order preservation applies.

#3 The ordering of the specifiers/adjuncts of the nominal phrase is generally frozen for reasons of locality (Bošković 2016, a.o.), meaning that, among other constraints, an adjective cannot move above a demonstrative within NP before extracting:

- (6) **No rearranging of the constituents of the left edge of NP**  
 Big I saw [  $\tau_{\text{big}}$  this  $\tau_{\text{big}}$  cat ]

## 4 IMPLEMENTATION

- In an NP with both a demonstrative and adjective, when spell-out applies, the ordering **DEM** > **ADJ** will be established. The relative order of these two elements is not changed if the demonstrative extracts alone:

- (7) **DEM** > **ADJ** order preserved after **DEM** LBE  
 \*This I saw [ t<sub>this</sub> big cat ]      Linearization: *this* < *big* < *cat*

- In contrast, if an adjective is extracted across an in situ demonstrative, the adjective will come to precede the NP it originated in, and thus also precede the demonstrative. This scenario is unacceptable, since it violates the previously established **DEM** > **ADJ** order:

- (8) **DEM** > **ADJ** order violated by **ADJ** extraction from beneath **DEM**  
 \*Big I saw [ this  $t_{big}$  cat ]                      Linearization: *big* < *I* < *saw* < *this* < *cat*

- But if adjective extraction is accompanied by extraction of the demonstrative, and if that demonstrative lands in a position above the adjective, notice that their relative ordering within NP and after extraction is the same. This satisfies the demands of Cyclic Linearization:

- (9) **DEM > ADJ order preserved by multiple LBE**  
 ✓ This big I saw [ t<sub>this</sub> t<sub>big</sub> cat ]  
 Linearization: *this* < *big* < *I* < *saw* < *cat*

## 5 EXTENSIONS

- **Approximative inversion:** A numeral takes on an “approximate” reading when following the nominal head (10a). If the nominal head is extracted the same reading occurs (10b), suggesting that such extraction requires prior establishment of  $N < \#$  order, as CL predicts. Extraction of pre-nominal adjectives lacks the approximative reading (10c).

- (10) a. Ja videl [kotov desja't']  
I saw cats ten  
'I saw about ten cats.'
- b. kotov<sub>j</sub> ja videl [t<sub>j</sub> desja't']  
cats I saw ten  
'I saw about ten cats.'
- c. desja't'<sub>k</sub> ja videl [t<sub>k</sub> kotov]  
ten I saw cats  
'I saw ten cats.' (*not* about ten)

- P-fronting under LBE:** LBE from beneath P requires fronting P to a position in front of the extracted phrase (Pereltsvaig 2008, a.o.). If PP is a phrase (Sabbagh 2007, Abels 2012, a.o.) and locality concerns prevent extraction via spec-PP, then such P-fronting is expected to be necessary if possible in order to satisfy order preservation:

- (11) a. \***novyj<sub>k</sub>** my pošli [v t<sub>k</sub> magazin]  
 new we went to shop  
 'We went to a new shop.'
- b. v<sub>j</sub> **novyj<sub>k</sub>** my pošli [t<sub>j</sub> t<sub>k</sub> magazin]  
 to new we went shop  
 'We went to a new shop.'

## 6 A POINT OF CONTENTION: BINDING

- Bošković (2016) accounts for similar patterns in Serbo-Croatian, and argues that his theory has an advantage over Cyclic Linearization because it accurately predicts that in Serbo-Croatian, a possessive anaphor cannot be bound unless it is at the NP edge.
- Zanon (to appear) argues that this claim holds for Russian. We do not believe that it does:

- (12) a. **Katja** privela [ ètu **svoju** podrugu]  
Katya brought this self's friend  
b. **Katja** pročitala [ knigu **svojego** druga]  
Katya brought book self's friend.GEN