

Class 4: Is DP a phase?

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1 Anti-Locality and extraction from DP

- Some Slavic languages allow for what is known as *Left-Branch Extraction* (LBE):

(1) Čju₁ on kupil [NP t₁ mašinu] ?
 whose he bought car
 'Whose car did he buy?'
 (Russian; Grebenyova 2012:83)

(2) Jaki₁ Paweł kupił swojej żonie [NP t₁ samochód] ?
 what Pavel bought his wife car
 'What car did Pavel buy for his wife?'
 (Polish; Wiland 2010:335)

(3) Čijeg₁ si vidio [NP t₁ oca] ?
 whose are seen father
 'Whose father did you see?'
 (Serbo-Croatian; Bošković 2005a:11)

(4) Jakou₁ čte Petr [NP t₁ knihu] ?
 which reads Peter book
 'Which book is Peter reading?'
 (Czech; Corver 1990:330)

- Other languages do not, but why?
- Bošković (2005b) points out a more general pattern, languages such as Serbo-Croatian allow both extraction of left-branch modifier and of a complement PP (5), however languages such as English do not (6).

(5) *Left-Branch Extraction* (Bošković 2005b:2):

- a.*Whose₁ did you see [DP t₁ father] ?
 b.*Beautiful₁ he saw [DP t₁ houses] ?
 c. Čijg₁ si vidio [NP t₁ oca] ?
 whose are seen father
 'Whose father did you see?'
 d. Lijepe₁ je vidio [NP t₁ kuće] ?
 beautiful is seen houses
 'He saw beautiful houses.'

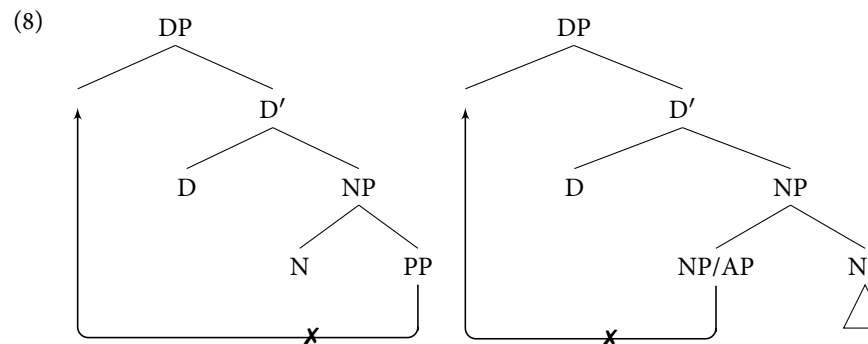
(6) *Adjunct extraction* (Bošković 2005b:9f.):

- a.*From which city₁ did Peter meet [DP girls t₁] ?
 b. Iz kojeg grada₁ je Petar sreo [NP djevojke t₁] ?
 from which city is Peter met girls
 'From which city did Peter meet girls?'

- Bošković (2005b) proposes that this follows from the fact that English has overt articles (and therefore a DP), whereas Serbo-Croatian does not.
- If D is a phase head, then extraction out of DP will have to pass through Spec-DP.
- This is problematic given the assumption of Anti-Locality as defined in (7).

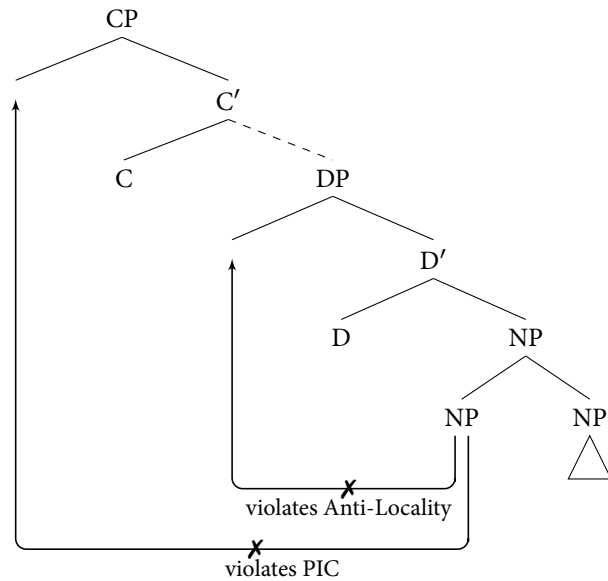
(7) *Anti-Locality*:

Movement out of a phrase X, must cross a maximal projection other than XP.



- When coupled with the PIC, this means that movement out of a DP is actually impossible:

(9) *Anti-Locality:*



- The PIC forces movement to Spec-DP and Anti-Locality rules out this movement.
- This interaction between Anti-Locality and the PIC is how Bošković (2005b) derives Ross' Left Branch Condition.
- The assumption for languages that lack the LBC is that this is a result of them lacking a DP projection (10) (cf. Uriagereka 1988; Corver 1990).

(10) [*wh*₁ ... [NP t₁ [N' N]]] (does not violate PIC)

2 Contextual phases

- Bošković's (2005b) theory predicts that extraction from languages without DPs should be freely possible. This is not the case, however:

(11) *No 'deep' LBE:*

a. On je vidio [NP [N' prijatelja [NP njegove majke]]]
 he is seen friend.ACC his.GEN mother.GEN
 'He saw a friend of his mother'

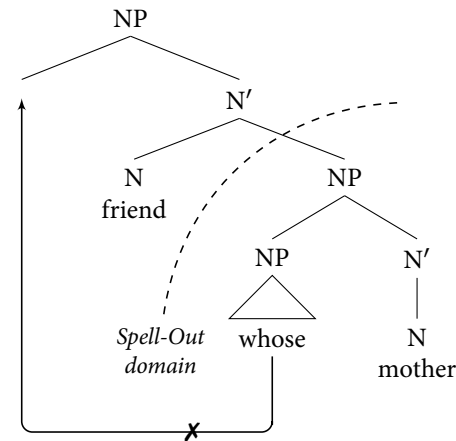
b.*Čije₁ je on vidio [NP [N' prijatelja [NP t₁ majke]]]
 whose.GEN is he seen friend.ACC mother.GEN
 'Whose mother did he see a friend of?' (Bošković 2005b:8)

- To rule this out, Bošković (2016) adopts a contextual view of phases (sometimes called *dynamic phases*).

(12) *Contextual phases:*

The highest projection in an extended projection constitutes the phase.

(13)



Problem: As Bošković (2012:205) points, numeral quantifiers differ from demonstratives in permitting sub-extraction. In (14a), extraction of the left-branch *lijepo* ('beautiful') is possible across the numeral *mnoge* ('many'), but is not across the corresponding demonstrative *ove* ('these') (14b), as in English (14c).

(14) *Deep LBE possible across quantifiers:*

- a. Lijepo₁ je on vidio [QP t₁ [Q' mnoge [NP t₁ [N' kuće]]]]
 beautiful is he seen many houses
- b.*Lijepo₁ je on vidio [NP t₁ [N' ove [NP t₁ [N' kuće]]]]
 beautiful is he seen these houses
 'He saw these beautiful houses.'
- c.*Beautiful₁ [DP t₁ [D' [D these] [NP t₁ [N' houses]]]]

Bošković (2012:205) suggests that this difference follows from the fact that quantifier phrases contain invisible functional structure (15), as Bošković (2006) proposes in his analysis of genitive of quantification. Here, intermediate movement to the edge of QP does cross a full maximal projection (FP) and Anti-Locality is not violated.

(15) [QP *lijepo*₁ [Q' [Q *mnoge*] [FP F [NP t₁ [N' *kuće*]]]]]

- This seems to undermine the Anti-Locality argument – we can always posit invisible functional structure when extraction is exceptionally possible.

- Bošković (2016) presents another argument for dynamic phases based on multiple extraction:

(16) *Adjectives and possessors can be merged in either order* (Bošković 2016:13):

- a. [NP Jovanova [N' omiljena [N' kola]]]
 Jovan's favourite car
- b. [NP omiljena [N' Jovanova [N' kola]]]
 favourite Jovan's car
 'Jovan's favourite car.'

However, there is an asymmetry in sub-extraction. As (17) shows, extraction of the complement of an adjective is only possible from the outer specifier (cf. 'deep' LBE; Bošković 2005b). If the adjective associated with the PP is merged as an outer specifier, extraction is possible (17a).

- (17) a. $\left[\text{PP na tebe} \right]_1$ sam vidio [NP [AP ponosnog t_1] [N' Jovanovog [N' oca]]]
 of you am seen proud.ACC Jovan's.ACC father
- b. $\left[\text{PP na tebe} \right]_1$ sam vidio [NP Jovanovog [N' [AP ponosnog t_1] [N' oca]]]
 of you am seen Jovan's.ACC proud.ACC father
 'I saw Jovan's father who is proud of you.'
- (Bošković 2016:9,12)

(18) *Edge of the edge* (Bošković 2016):

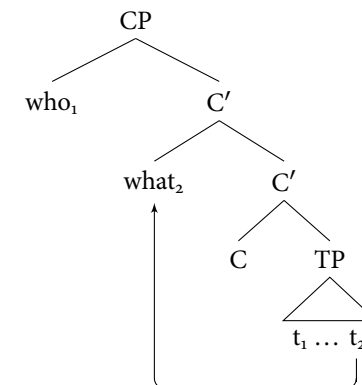
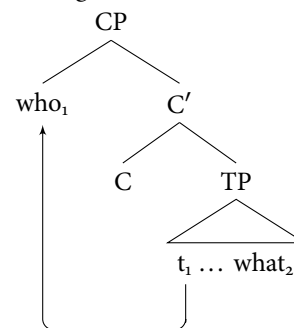
Extraction is only possible from the outermost specifier of a phase.

- Now consider the following multiple scrambling cases:

- (19) a. $\left[\text{CP Jovanovog}_2 \left[\text{C}' \left[\text{na tebe} \right]_1 \text{ sam vidio} \left[\text{NP } t_2 \left[\text{N}' \left[\text{AP ponosnog } t_1 \right] \left[\text{N}' oca \right] \right] \right] \right] \right]$
 Jovan's.ACC of you am seen proud.ACC father
- b. $\left[\text{CP} \left[\text{na tebe} \right]_1 \left[\text{C}' Jovanovog}_2 \text{ sam vidio} \left[\text{NP } t_2 \left[\text{N}' \left[\text{AP ponosnog } t_1 \right] \left[\text{N}' oca \right] \right] \right] \right] \right]$
 of you Jovan's.ACC am seen proud.ACC father
 'I saw Jovan's father who is proud of you.'

- Bošković (2016) argues that we need a 'tucking-in' derivation here (Richards 1997, 1999, 2001) because the PP cannot be extracted in the first step.
- If it were in the outer edge, it would block movement of the possessor in the second step.

(20) *Tucking-in:*



- There is an issue here. APs with PP complements are not possible in prenominal position:

- (21) a. *Vidio sam [NP [AP ponosnog [PP na tebe]]] [N' Jovanovog [N' oca]]]
 seen am proud of you Jovan's father
- b. *Vidio sam [NP Jovanovog [N' [AP ponosnog [PP na tebe]]] [N' oca]]]
 seen am Jovan's proud of you father
 'I saw Jovan's father who is proud of you.'

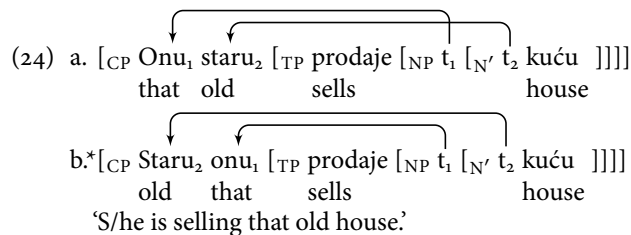
From this, Bošković (2013:16) concludes that 'a prenominal adjective can have a complement in SC only if the complement is extracted out of the AP'. While this is descriptively correct, it does not acknowledge the fact that adjectival complements are grammatical in postnominal position, as in (22) (also see Zlatić 1997:50f.).

- (22) Vidio sam [NP Jovanovog [N' oca [AP ponosnog [PP na tebe]]]]
 seen am Jovan's father proud of you
 'I saw Jovan's father who is proud of you.'

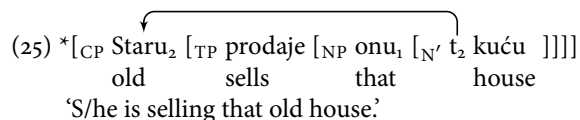
- This the base position of an AP with a complement is postnominal, then we seem to have a case of stranding at a phase edge:

- (23) a. $\left[\text{PP na tebe} \right] \text{ sam vidio} \left[\text{NP Jovanovog} \left[\text{NP oca} \left[\text{AP ponosnog } t_{\text{PP}} \right] \right] \right]$
 of you am seen Jovan's father proud
 'I saw Jovan's father who is proud of you.'
- b. $\left[\text{PP na tebe} \right] \text{ sam vidio} \left[\text{NP} \left[\text{AP ponosnog } t_{\text{PP}} \right] \left[\text{NP Jovanovog} \left[\text{NP oca } t_{\text{AP}} \right] \right] \right]$
 of you am seen proud Jovan's father
 'I saw Jovan's father who is proud of you.'

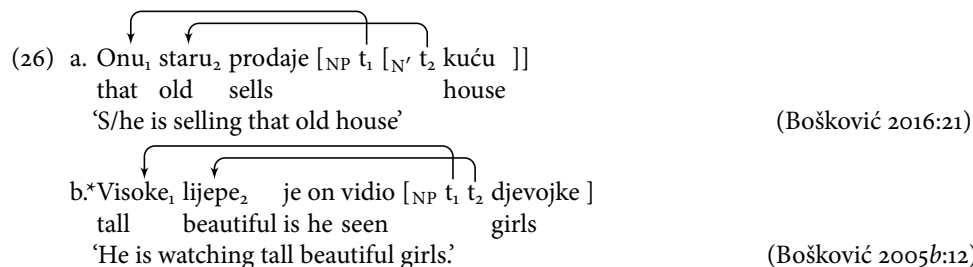
- Another argument comes from the following data:



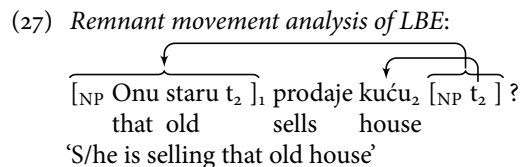
- He argues that this must involve a tucking-in derivation because *staru* cannot be extracted as the first step:



- There is a serious issue with this analysis. Bošković (2005b) shows that multiple extraction of adjectives is impossible (26b).



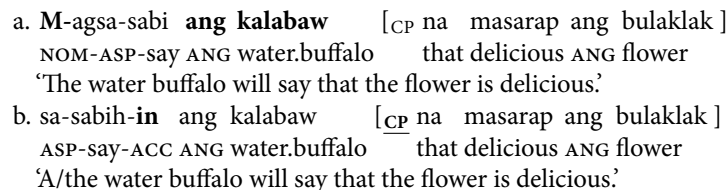
- This is a major problem since (26a) and (26b) have entirely parallel structures under Bošković's (2016) assumptions.
- An obvious alternative would be a remnant movement derivation (Franks & Progovac 1994; Abels 2003; Bašić 2004, 2009):



3 Unlocking DP phases by agreement

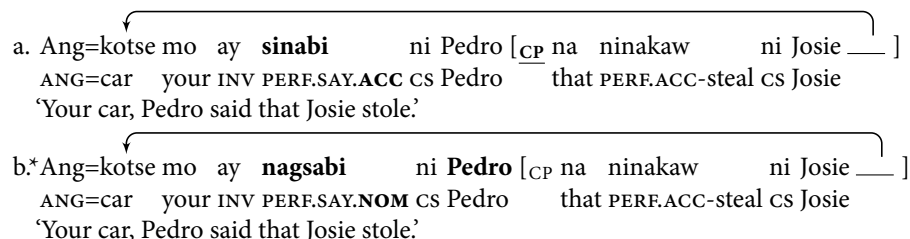
- There is a claim that phases can/must be 'unlocked' by first agreeing with them.
- Rackowski & Richards (2005) show that the verb in Tagalog can show either agreement with the matrix subject (NOM) or the object embedded clause (ACC):

(28) *Variable matrix agreement in Tagalog* (Rackowski & Richards 2005:586):



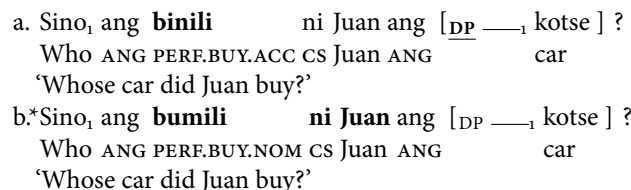
- Interestingly, long extraction from an embedded clause is only possible with

(29) *Matrix agreement determines extractability* (Branan 2018:412):



- The analysis is here is again based on dynamic phases. In particular, extraction is only possible if there is first φ -agreement with the CP phase to 'unlock' it (see Halpert 2016).
- Branan (2018) points out that we find the very same effect with extraction from DP in Tagalog:

(30) *Extraction from DP in Tagalog requires agreement* (Branan 2018:413)



- This effect is seen in other languages, for example Northern Ostyak:

(31) *Extraction from DP in Northern Ostyak requires object agreement* (Branan 2018:415):

- a. Juwan motta [DP xot-əl ___] kášalə-s-**e:m**
 John before house-3SG see-T-**1SG.3OBJ**
 'I saw John's house before.'
- b.*Juwan motta [DP xot-əl ___] kášalə-s-**ə:m**
 John before house-3SG see-T-**1SG**
 'I saw John's house before.'

• Branan & Davis (2018) show that the same effect holds in Chichewa:

(32) *Adjective extraction in Chichewa requires object agreement:*

- a. **Yókálambak**₁ anyáni a-na-**í**-gúl-ílá makású awa óbúntha
 4SM-aged 2-baboons 2SM-PST-**4OM**-buy-APPL-FV 6-hoes 6-these 6SM-blunt
 [DP mikángo ___₁]
 4-lions
 'The baboons bought the aged lions these blunt hoes'
- b.***Zakudak**₁ atsíkáná á mfúmu a-a-gul-á [DP mbûzi ___₁]
 10SM-black 2-girls 2AssocM 9-chief 2SM-PRF-buy-FV 10.goats
 'The chief's girls have bought black goats'

• If the phase unlocking effect for CP is real, then we must conclude that it holds for DP, implying that DP is a phase.

4 Phase extension by head movement

- den Dikken (2007) and Gallego (2010) propose that phases can be 'extended' by head movement.
- Their arguments come from extraction from small clauses and from the interaction of T-to-C movement with Superiority.

(33) *Phase extension:*

If a phase head α moves to a higher head β , then β becomes the phase.

• A compelling argument for this in the DP domain comes from the determiner cliticization in Galician:

(34) *Determiner cliticization in Galician* (Uriagereka 1989:262):

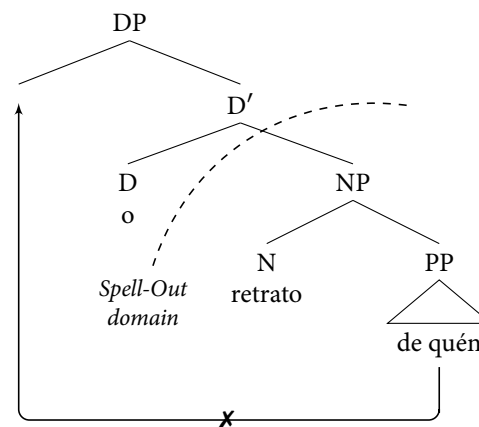
- a. comemos [DP o caldo]
 ate.3PL DET soup
- b. comemo-lo [DP t_i caldo]
 ate.3PL-DET soup
 'We ate the soup'
- c.*comemo-lo [DP o caldo]
 ate.3PL-DET DET soup

'We ate the soup'

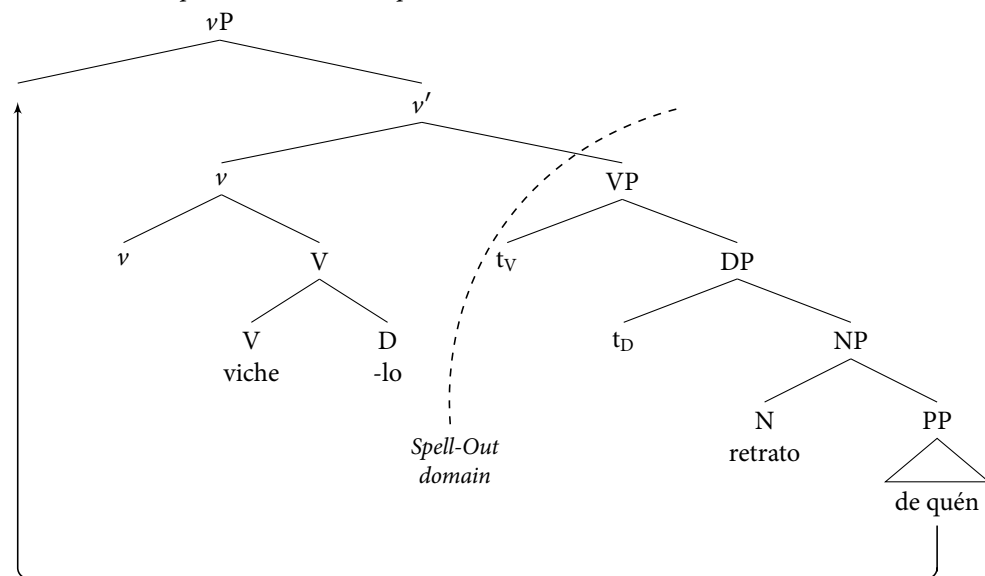
(35) *Determiner incorporation feeds extraction in Galician* (Uriagereka 1988:81):

- a.*[PP De quén] viche [DP o retrato t_{PP}] ?
 of whom saw.2SG DET portrait
 'Who have you seen the portrait of?'
- b.*[PP De cal] liche [DP a reseña t_{PP}] ?
 of which read.2SG DET review
 'Which one have you read the review of?'
- c. [PP De quén] viche-lo₁ [DP t_i retrato t_{PP}] ?
 of whom saw.2SG-DET portrait
 'Who have you seen the portrait of?'
- d. [PP De cal] liche-la [DP t_i reseña t_{PP}] ?
 of which read.2SG-DET review
 'Which one have you read the review of?'

(36)



(37) *Determiner incorporation extends the phase:*



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