

# More Evidence for Multidominance

Barbara Citko (University of Washington-Seattle)

Outline:

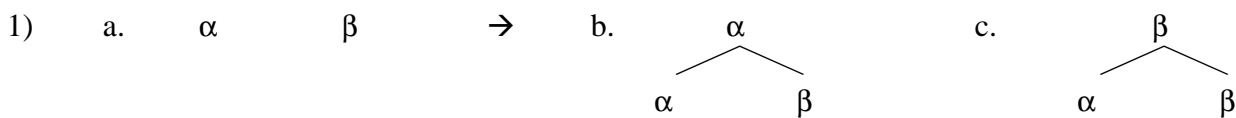
Parallel Merge: What is it and what can it do?

Gapping: More multidominant than previously thought

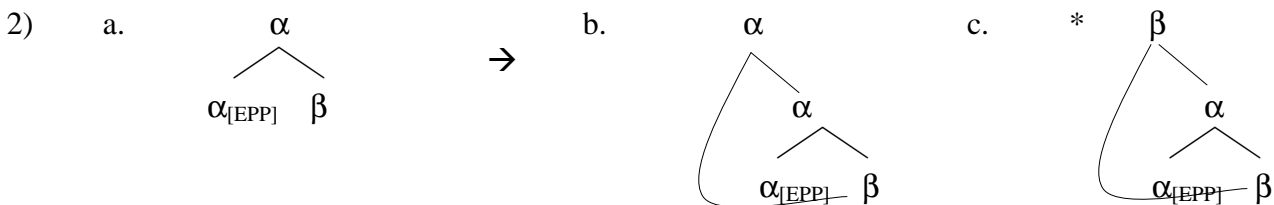
Right Node Raising: Less multidominant than previously thought

## 1. Parallel Merge

### • External Merge of $\alpha$ and $\beta$



### • Internal Merge of $\alpha$ and $\beta$

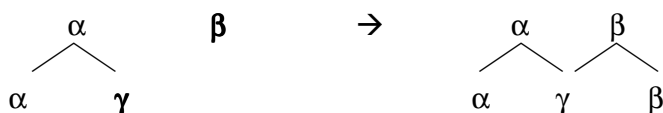


### • Parallel Merge

#### 3) a. Merge $\alpha$ and $\gamma$

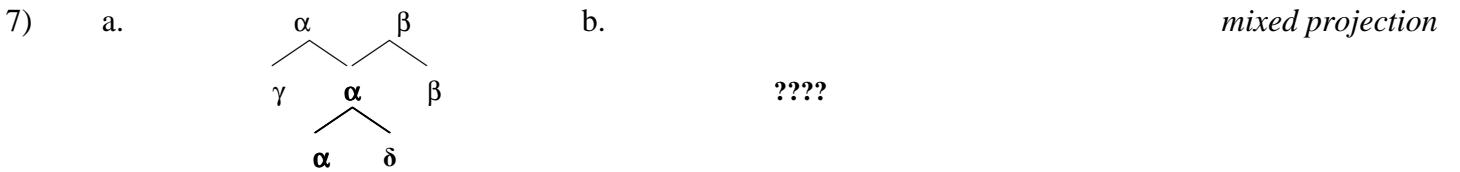
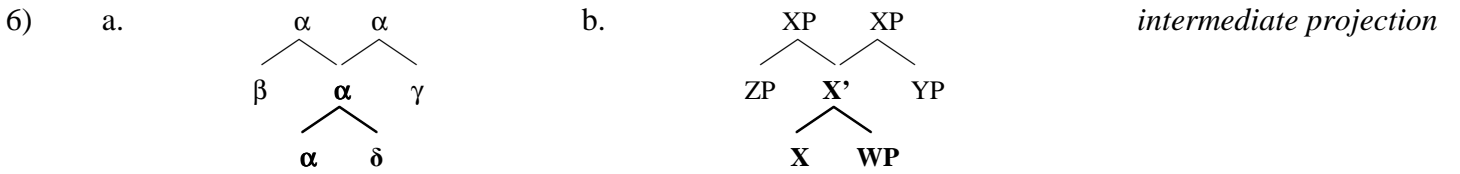
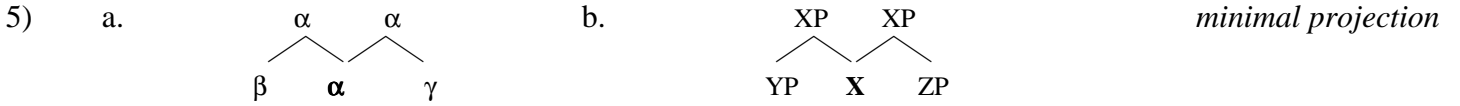
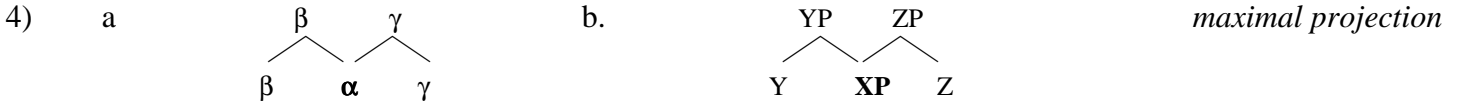


#### b. Merge $\beta$ and $\gamma$

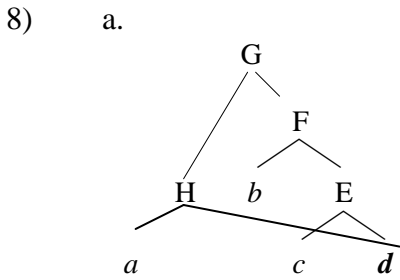


• ‘Merge cannot create objects in which some object *W* is shared by the merged elements *X*, *Y*. It has been argued that such objects exist. If so, that is a departure from SMT, hence a complication of UG. ... It [Parallel Merge, B.C.] requires new operations and conditions on what counts as a copy, hence additional properties of UG.’ (Chomsky 2005:6)

• Structures *Parallel Merge* can create:

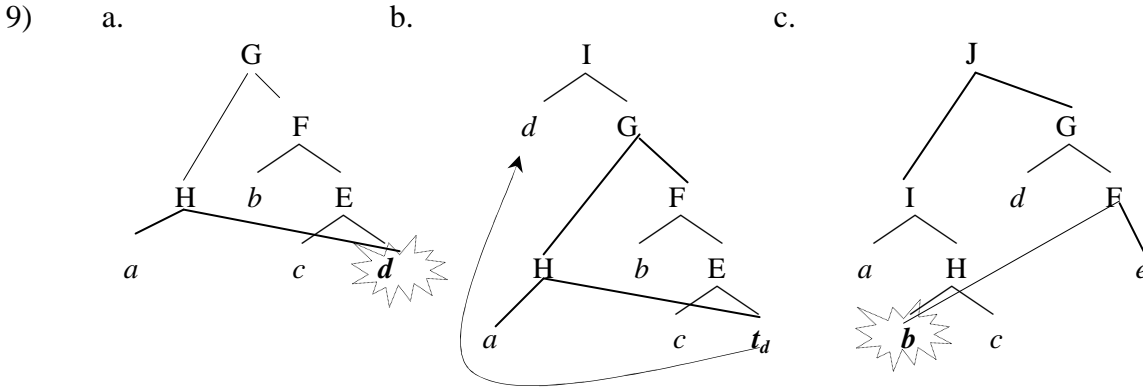


• Linearization of *Parallel Merge* structures:



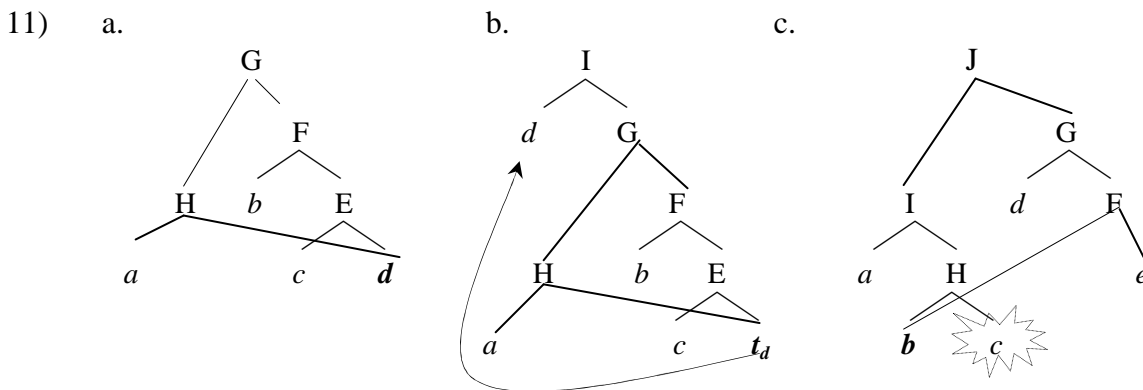
- b. *a d b c d*
- c. *a d b c*
- d. *a b c d*

A. Citko 2005: linearizes multiply dominated elements *ex situ*; movement ‘responsible’ for linearizing *Parallel Merge* structures, traces/unpronounced copies do not have to be linearized:



**B.** Wilder (1999/2007): relaxes LCA, linearizes multiply dominated elements in situ, requires multiply dominated elements to be right-peripheral.

- 10) a. X fully dominates  $\alpha$  iff X dominates  $\alpha$  and X does not share  $\alpha$   
 b.  $\alpha$  is shared by X and Y iff (i) neither of X and Y dominates the other, and (ii) both X and Y dominate  $\alpha$ .  
 c. X c-commands Y only if X does not fully dominate Y  
 d.  $d(A)$  = the set of terminals fully dominated by A. (Wilder 1999:590-591)



**C.** Gracanin-Yukse's (2007) Constraint on Sharing (COSH): linearizes multiply dominated elements in situ, requires the mothers of shared elements to dominate identical sets of terminal nodes.

- 12) Constraint on Sharing (COSH) (Gracanin-Yukse 2007:14)

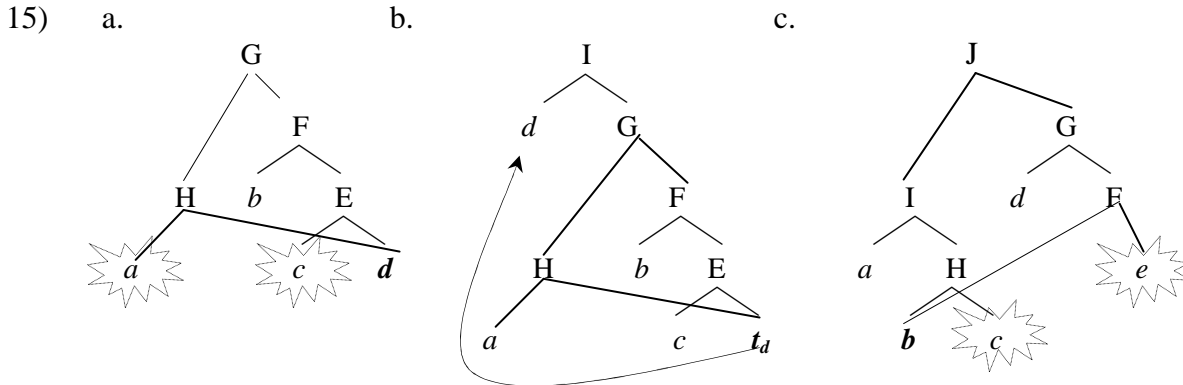
For any  $\alpha$ , M, and N, where  $M \neq N$ , and

- (i) M and N immediately share  $\alpha$ , and
- (ii) M and N horizontally share  $\alpha$ , and
- (iii) there is no node K that vertically shares  $\alpha$  with both M and N

For any terminal node  $\beta$ , M completely dominates  $\beta$  iff N completely dominates  $\beta$ .

- 13) X and Y horizontally share  $\alpha$  if  $X \neq Y$  and:  
 (i) X does not dominate Y and Y does not dominate X; and  
 (ii) X reflexively dominates X' and Y reflexively dominates Y', and X' and Y' immediately share  $\alpha$ . (Gracanin-Yukse 2007:10)

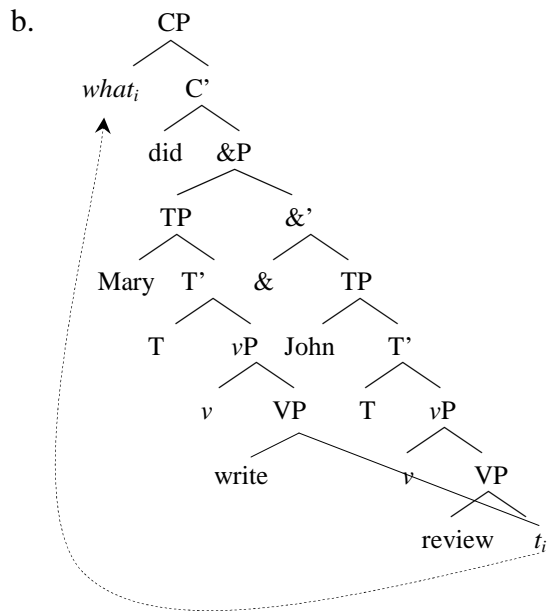
- 14) a.  $X$  reflexively dominates  $Y$  if  $X$  dominates  $Y$  or  $X = Y$ .  
 b.  $X$  and  $Y$  immediately share  $\alpha$  if  $X \neq Y$  and  $X$  is a mother of  $\alpha$  and  $Y$  is a mother of  $\alpha$ .



• (Early) Empirical Support for *Parallel Merge*:

A. ATB wh questions (Williams 1978, ... , 2005, among others)

- 16) a. What did Mary write and John review?



- 17) a. ATB wh-questions are a principled exception to the Coordinate Structure Constraint;  
 b. ATB wh-movement does not result in multiple wh-fronting;  
 c. ATB wh-questions show case matching effects;  
 d. Across-the-board left branch extraction does not exist;  
 e. Covert ATB movement does not exist.

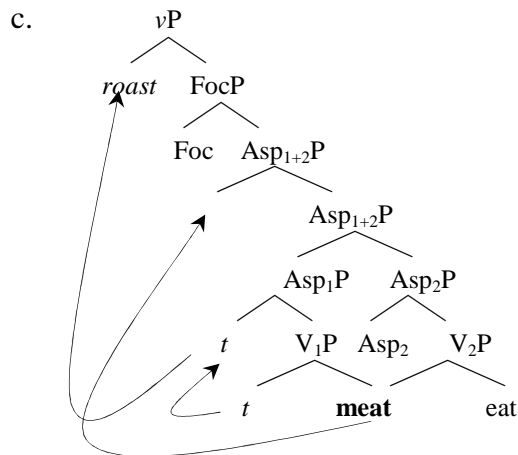
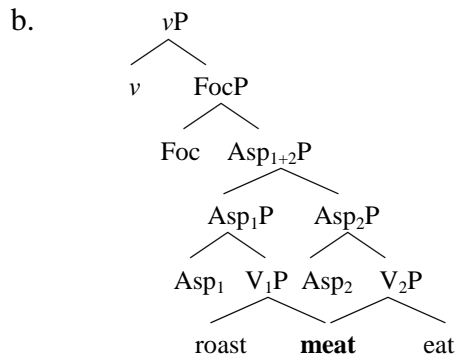
- 18) a. \*  $What_i$  did John recommend a book and Mary read  $t_i$ ?  
 b.  $What_i$  did John recommend  $t_i$  and Mary read  $t_i$  ?

- 19)  $[_{CP} WH_i WH_j [_{\&P} [TP \dots t_i \dots ] [TP \dots t_j \dots ] ] ]$

- 20) a. \* *What<sub>j</sub> what<sub>i</sub> did John write  $t_i$  and Mary review  $t_j$ ?*  
 b. \* *Who<sub>i</sub> what<sub>j</sub>  $t_i$  read  $t_j$ ?*
- 21) a. \* *Co<sub>i</sub> co<sub>j</sub> Jan polecił  $t_i$  a Maria przeczytała  $t_j$ ?* [Polish]  
 what what Jan recommended and Maria read  
 ‘What did Jan recommend and Maria read?’  
 b. *Kto<sub>i</sub> co<sub>i</sub>  $t_i$  czyta  $t_i$ ?*  
 who<sub>i</sub> what reads  
 ‘Who reads what?’

**B. Serial verb constructions (Hiraiwa and Bodomo 2008)**

- 22) a. ò dà sɛ́ la nɛnè ɔ̀ɔ̀ [Dàgááré]  
 3sg PAST roast FEM meat eat  
 ‘He roasted the meat and ate it.’ (Hiraiwa and Bodomo 2008:2)

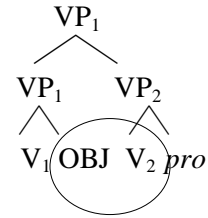
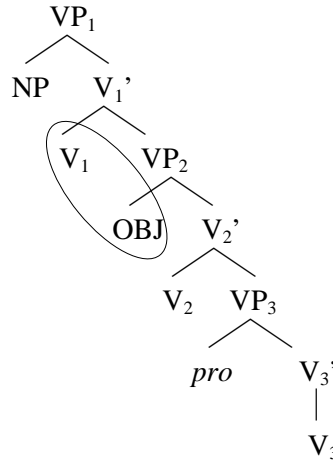
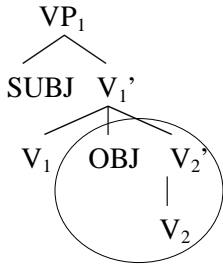


- 23) a. nénè sééó lá ká ó se ɔ́.  
 meat roast.NML F C 3SG roast eat  
 ‘It is roasting meat that he roasted and ate.’ (clefting of V<sub>1</sub> + object)

- b.      néné    ɔ́ɔ              lá      ká      ó      sé      ɔ́ɔ  
 meat eat.nml      F      C      3sg      roast      eat  
 ‘It is eating meat that he roasted and ate.’

(clefting of V<sub>2</sub> + object)  
 (Hiraiwa and Bodomo 2008:3)

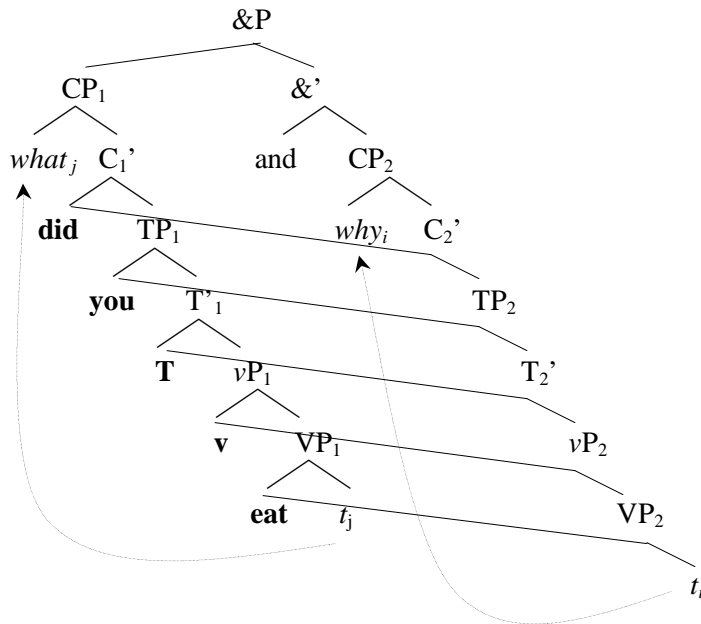
- 24) a. Baker 1989                      b. Collins 1997                      c. Hale 1991



C. wh-questions with conjoined wh-phrases (Gracanin-Yuksekk 2007, Citko 2008)

- 25) a.      % What and why did you eat?

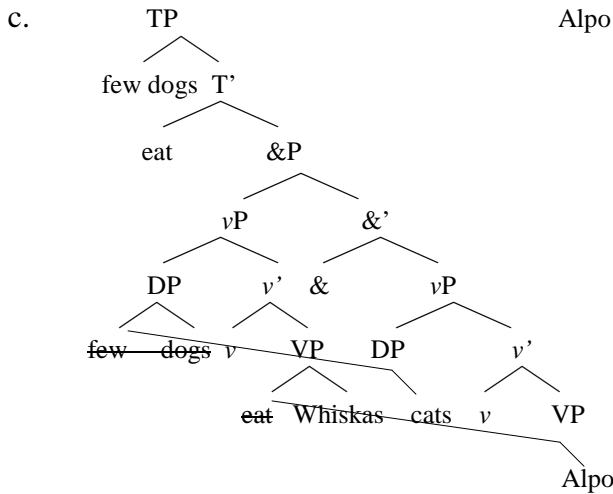
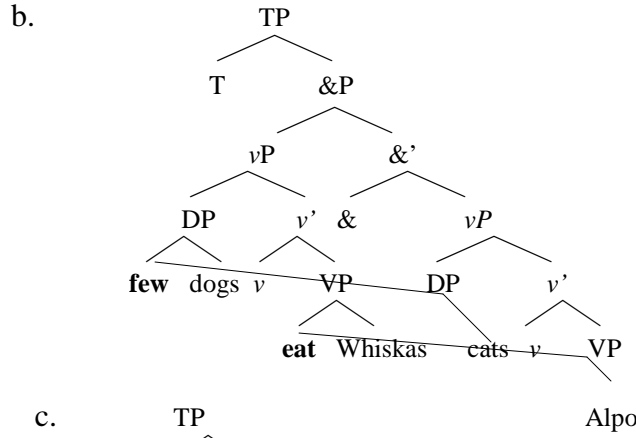
b.



- 26) a. CWH wh-questions allow violations of the Coordination of Likes Constraint  
 b. wh-pronouns in CWH wh-questions cannot be left in situ  
 c. arguments of different grammatical functions cannot be coordinated  
 d. not all verbs are allowed in CWH wh-questions  
 e. CWH wh-questions allow only single pair interpretations

**D.** Determiner sharing constructions (Citko 2007; non-multidominance accounts: Ackema and Szendroi 2002, Johnson 2000, Lin 2000, 2002, McCawley 1993)

27) a. Few dogs eat Whiskas or few cats eat Alpo. (Johnson 2000:59)

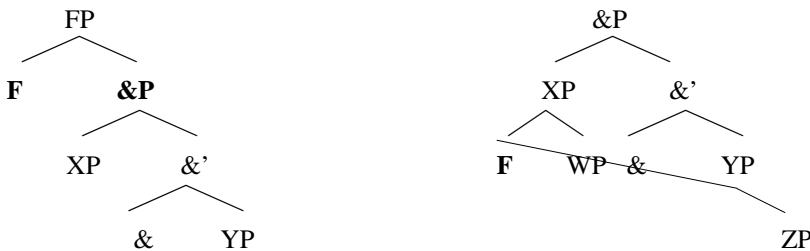


- More evidence for Parallel Merge
  - Gapping: *more* multidominant than previously thought
  - Right Node Raising: *less* multidominant than previously thought

**2. Gapping: Evidence for a *More* Multidominant Structure**

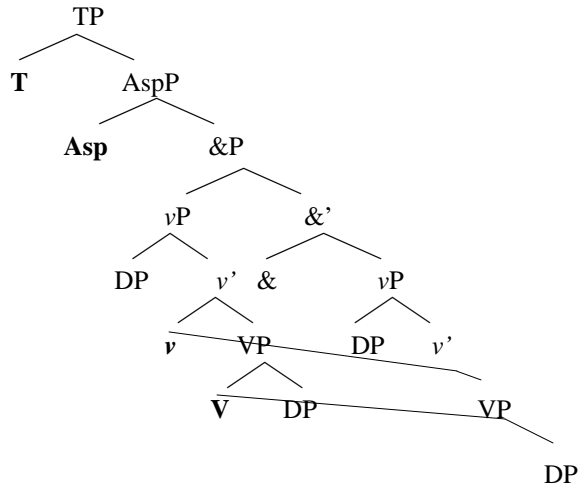
28) a. Some ate donuts and others ate croissants. *simple gaps*  
 b. Some will eat donuts for breakfast and others will eat donuts for lunch. *complex gaps*

29) a. sharing by *high Merge*      b. sharing by *Parallel Merge*



- Both types of sharing are involved in gapping
- T and Asp are shared by *high Merge*
- V and *v* are shared by *Parallel Merge*

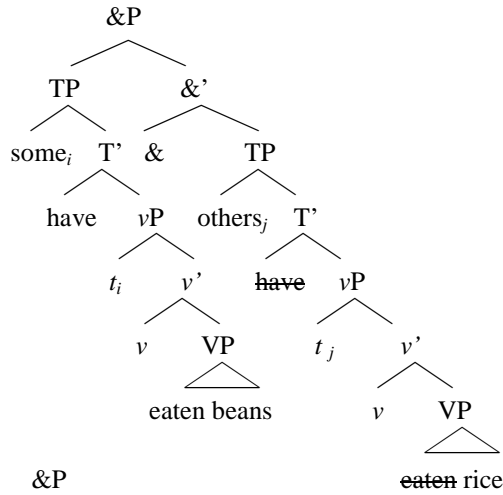
30)



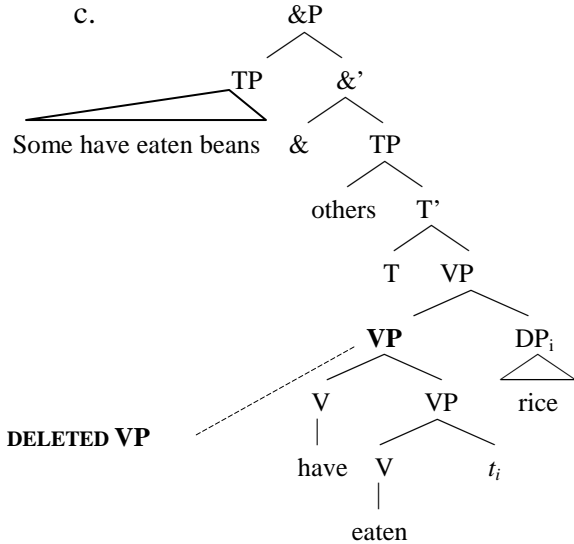
A. TP coordination + ellipsis (Ackema and Szendroi 2002, Hartmann 2000, Wilder 1997, among others)

31) a. Some have eaten beans and others ~~have eaten~~ rice.  
 b.

*gapping*

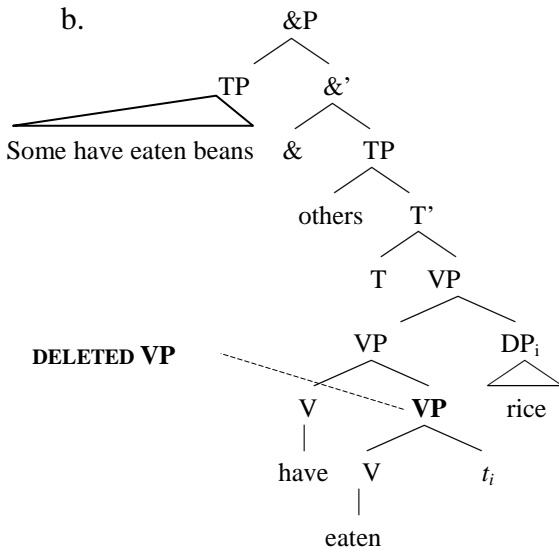


c.



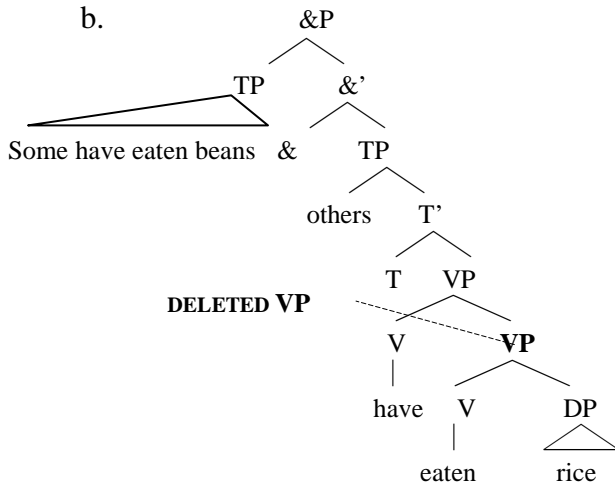
32) a. Some have eaten beans and others have ~~eaten~~ rice.

*pseudogapping*



33) a. Some have eaten beans and others have ~~eaten~~ rice, too.

*VPE*



34) Differences between VPE, gapping and pseudogapping (based on Coppock 2001)

	VP ELLIPSIS	GAPPING	PSEUDOGAPPING
Compatibility with non-linguistic antecedents	+	-	-
Active/Passive mismatches	+	-	-
Backward deletion	+	-	-
Cmpatibility with subordinating conjunctions	+	-	+

• Compatibility with non-linguistic antecedents:

35) a. [Hankamer brandishes a cleaver, advances on Sag]

*VPE*

Sag: Don't! My god, don't [<sub>VP</sub> Ø ]!

(Hankamer and Sag 1976: 409)

b. [Hankamer produces an orange, proceeds to peel it, and just as Sag produces an apple, says:]

# And Ivan ~~peels~~-an apple.

(Hankamer and Sag 1976: 410) *gapping*

- c. [Hankamer produces an orange, proceeds to peel it, and just as Sag produces an apple, says:]  
# And Ivan has ~~peeled~~ an apple. pseudogapping

• Active/passive voice mismatches:

- 36) a. This information could have been released by Gorbachov, but he chose not to ~~release it~~. VPE  
(Hardt 1993)  
b. \* Roses were brought by some, and others ~~did bring~~ lilies. gapping  
c. \* Roses were brought by some, and others did ~~bring~~ lilies. pseudogapping  
(Merchant 2008: 170)

• Backward deletion:

- 37) a. [Snoopy talking to Woodstock, Peanuts cartoon]  
You and I are alot alike . . . Just a common bird and a common dog.  
Of course, if we had wanted to ~~be great~~, we could have been great. (Potsdam 1997) VPE  
b. \* Sue ~~had~~ the lamb, but John will have the salmon. gapping  
c. \* Sue will ~~have~~ caviar but John will have the salmon. pseudogapping

• Compatibility with subordinating conjunctions:

- 38) a. Some had eaten shrimp *because* others did ~~eat shrimp~~, too. VPE  
b. \* Some had eaten mussels *because* others ~~had eaten~~ shrimp. gapping  
c. Some had eaten mussels *because* others had ~~eaten~~ shrimp. pseudogapping

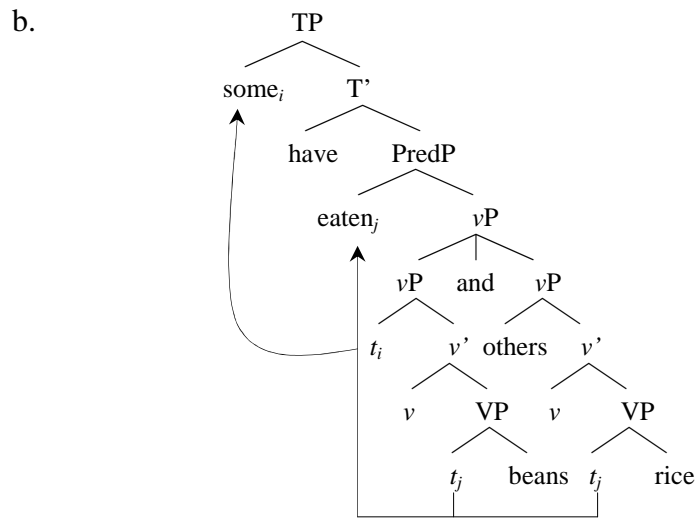
- Gapping differs from other types of ellipsis
- Gapping does not involve ellipsis (Johnson 1966/2003, to appear)

- 39) a. Ward can't eat caviar and Sue ~~can't eat~~ beans.  
b. Ward can't eat caviar and Sue can't eat beans.  
c. It is not possible (or desirable) for Ward to eat caviar and for Sue (simultaneously) to eat (merely) beans. (Siegel 1984:524)
- 40) a. Bob can't play checkers or Mary ~~can't~~ play chess.  
b. Bob can't play checkers and Mary can't play chess. (NOT A & NOT B)  
c. Bob can't play checkers or Mary can't play chess. (NOT A OR NOT B)  
(Lin 2000:277)
- 41) NOT (A OR B) = (NOT A) & (NOT B)
- 42) a. \* *No one's<sub>i</sub> duck* was moist enough or/and *his<sub>i</sub> mussels* were tender enough.  
b. *No one's<sub>i</sub> duck* was moist enough or *his<sub>i</sub> mussels* tender enough. (McCawley 1993:248)

- Gapping does not involve coordination of full clauses (TPs)

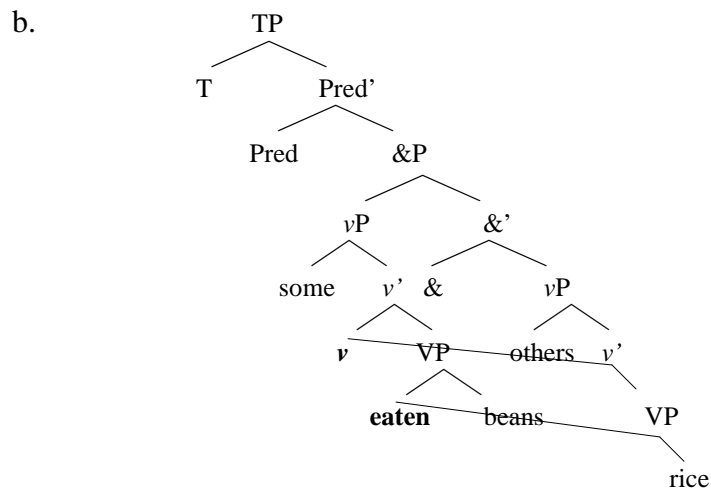
**B.** vP coordination + ATB movement of V (Johnson 1996/2003, to appear, Lin 2000, 2002)

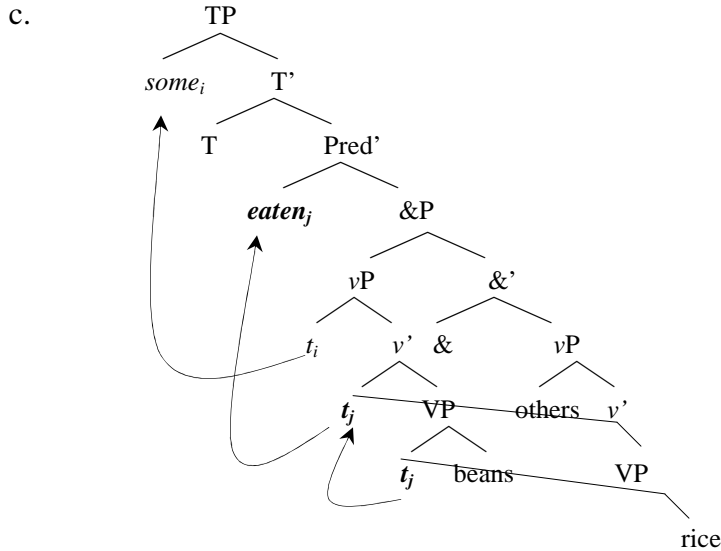
43) a. Some have eaten beans and others ~~have eaten~~ rice.



**C.** vP coordination + *Parallel Merge* of V and *v*

44) a. Some have eaten beans and others ~~have eaten~~ rice.





- Three structures for gapping:
  - TP coordination + ellipsis
  - vP coordination + ATB verb movement
  - vP coordination + *Parallel Merge* of V and v
- Different structures for gapping make different predictions about identity of deleted and non-deleted material

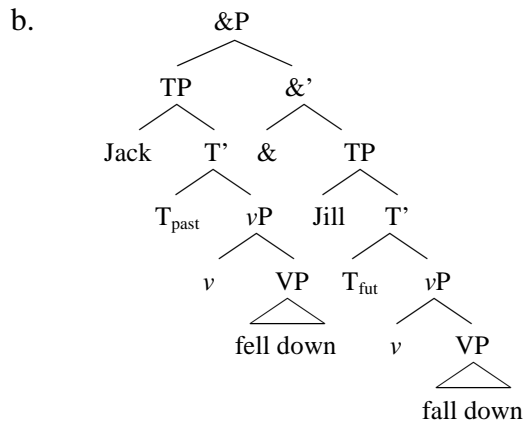
- 45) a. Jack *fell* down and Jill did ~~fall down~~ too. VPE  
 b. Are they *arguing*? Yes, they always do ~~argue~~.  
 c. I didn't *touch* the TV set, but Percy might have ~~touched~~ the TV set.  
 d. If you haven't *told* them yet, you really should ~~tell~~ them. (Potsdam 1997)

- 46) Warner's Main Verb Generalization (Warner 1985:64)

*In cases of ellipsis of a VP headed by a main verb, the verb need not have the same morphological form as its antecedent.*

- Mismatches are possible because of non-shared structure
  - mismatches in tense → two T heads

- 47) a. Jack *fell* down and Jill will ~~fall down~~ too.



- Identity requires shared structure
  - tense matching → one T head

- 48) a. sharing by *high Merge*      b. sharing by *Parallel Merge*



49)

Predicted Mismatches	TP coordination + ellipsis	+ vP coordination + ATB mvt of V	vP coordination + Parallel Merge of V and v
tense	√	*	*
aspect	√	*	*
voice	√	√	*

What kind of (mis)matches are possible in gapping?

- 50) a. \* Sue read NYT yesterday and Gina ~~read NYT~~ tomorrow.  
 b. \* Sue will read NYT tomorrow and Gina ~~will read NYT~~ yesterday.

Tense matching → shared T

- 51) a. Sue has run since 5am and Gina ~~is running~~ now.  
 b. Gina is running now and Sue ~~has run~~ since 5am.

Aspect matching → shared Asp

- 52) a. \* Some students read *Aspects* and *Syntactic Structures* ~~were read~~ by others.  
 b. \* *Aspects* were read by some students and others ~~read~~ *Syntactic Structures*.

Voice matching → shared v

Does rich(er) morphology make a difference?

- 53) \* Ewa czyta Gazetę Wyborczą dzisiaj a Maria ~~prze czytała~~ Gazetę Wyborczą wczoraj. [Polish]  
 Ewa read<sub>PRES</sub> Gazeta Wyborcza today and Maria read<sub>PAST</sub> Gazeta Wyborcza yesterday  
 'Ewa is reading Gazeta Wyborcza today and Maria did yesterday.'

Tense matching → shared T

Perfective/imperfective distinction:

54) czytać prze-czytać  
 read-impf perf-read  
 pisać na-pisać  
 write-impf perf-write

55) a. Ewa czytała ten artykuł godzinami.  
 Ewa read.IMPERF this article hours<sub>INSTR</sub>  
 'Ewa was reading this article for hours.'

b. \* Ewa czytała ten artykuł w dwie godziny.  
 Ewa read.IMPERF this article in two hours  
 'Ewa read this article in two hours.'

56) a. Ewa przeczytała ten artykuł w dwie godziny.  
 Ewa read.PERF this article in two hours  
 'Ewa read this article in two hours.'

b. \* Ewa przeczytała ten artykuł godzinami.  
 Ewa read.PERF this article hours<sub>INSTR</sub>  
 'Ewa was reading this article for hours.'

57) a. \* Ewa czytała ten artykuł godzinami a Maria ~~przeczytała ten artykuł~~  
 Ewa read.IMPERF this article hours<sub>INSTR</sub> and Maria read.PERF this article  
 w dwa dni.  
 in two days  
 'Ewa was reading this article for hours and Maria read it in two days.'

b. \* Ewa przeczytała ten artykuł w dwie godziny a Maria ~~czytała~~ ~~ten artykuł~~  
 Ewa read.PERF this article in two hours and Maria read.IMPERF this article  
 godzinami.  
 hours<sub>INSTR</sub>  
 'Ewa read this article in two hours and Maria was reading it for hours.'

Aspect matching → shared Asp

58) a. \* Niektórzy studenci przeczytali *Aspects* a *Syntactic Structures* ~~zostały przeczytane~~  
 some students read *Aspects* and *Syntactic Structures* were read  
 przez innych (studentów)  
 by others students

b. \* *Aspects* zostały przeczytane przez niektórych studentów a inni (studenci)  
*Aspects* were read by some students and other (students)  
~~przeczytali~~ *Syntactic Structures*.  
 read *Syntactic Structures*

Voice matching → shared v

- Gapping requires tense, aspect, and voice matching.
  - tense matching → one T
  - aspect matching → one Asp
  - voice matching → one *v*

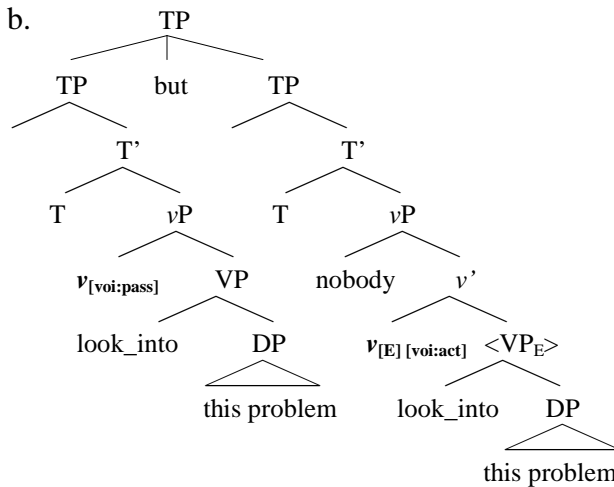
• Merchant/Johnson paradox

- 59) a. This problem was to have been looked into, but obviously nobody did ~~look into this problem~~.  
 b. The janitor must remove the trash whenever it is apparent that it should be ~~removed~~. VPE

- 60) a. \*Roses were brought by some, and others did ~~bring~~ lilies. *pseudogapping*  
 b. \*Some brought roses, and lilies were ~~brought~~ by others. (Merchant 2008: 169-170)

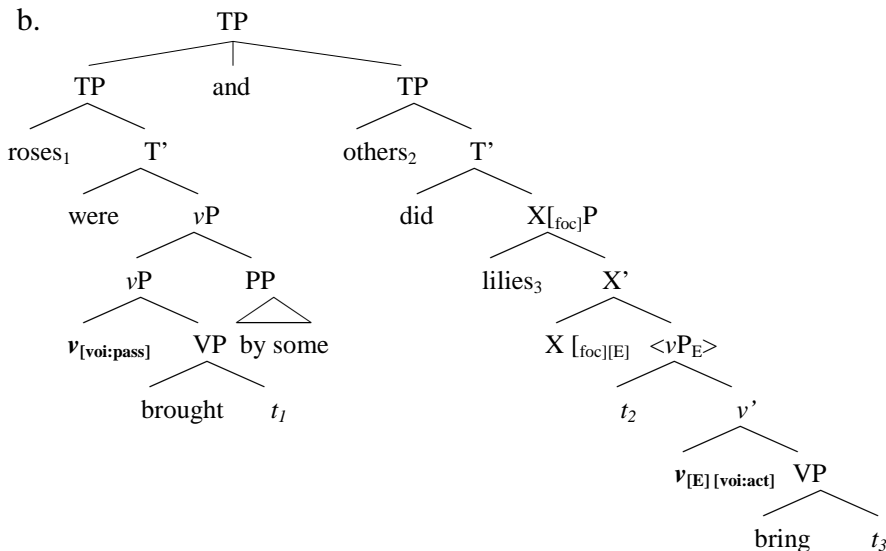
◦ VPE ellipsis allows voice mismatches → two *v*s, VP deletion:

- 61) a. This problem should be looked into but nobody did ~~look into this problem~~. VPE



◦ pseudogapping disallows voice mismatches → *v*P ellipsis:

- 62) a. \*Roses were brought by some but others did ~~bring~~ lilies.

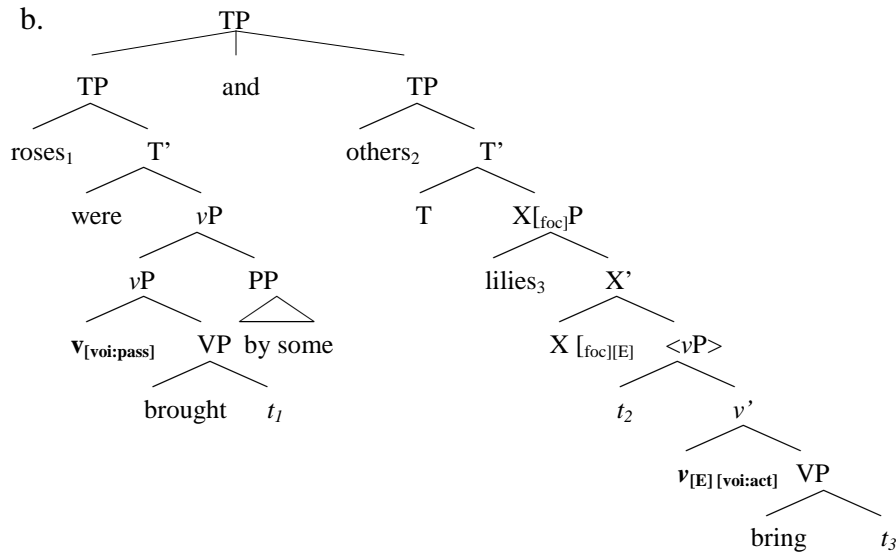


*pseudogapping*

◦ gapping disallows voice mismatches → vP ellipsis?

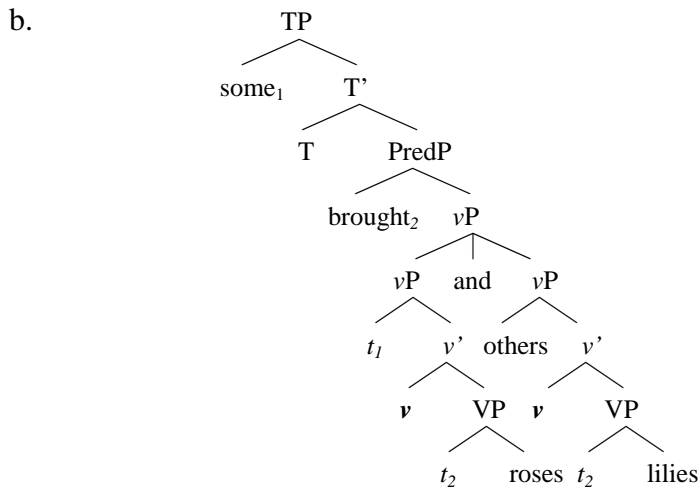
63) a. \*Roses were brought by some but others ~~brought~~ lilies

*gapping*



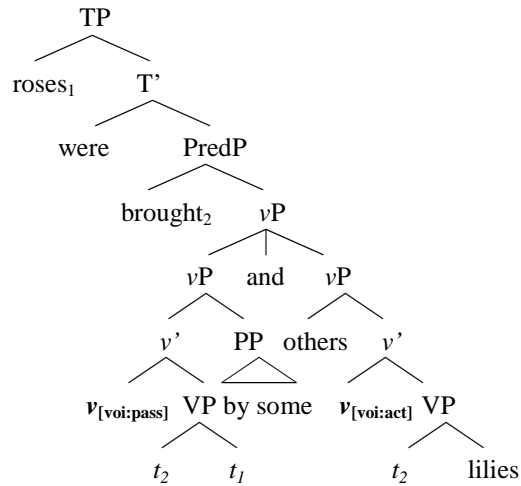
- Gapping is not ellipsis;
- Gapping involves vP coordination (Johnson 1996/2003, to appear)

64) a. Some brought roses and others ~~brought~~ lilies.



65) a. \*Roses were brought by some and others ~~brought~~ lilies.

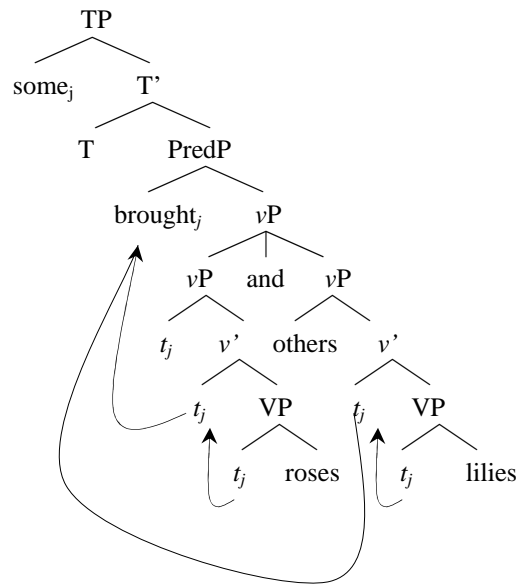
b.



• V to v movement + ATB v to Pred movement?

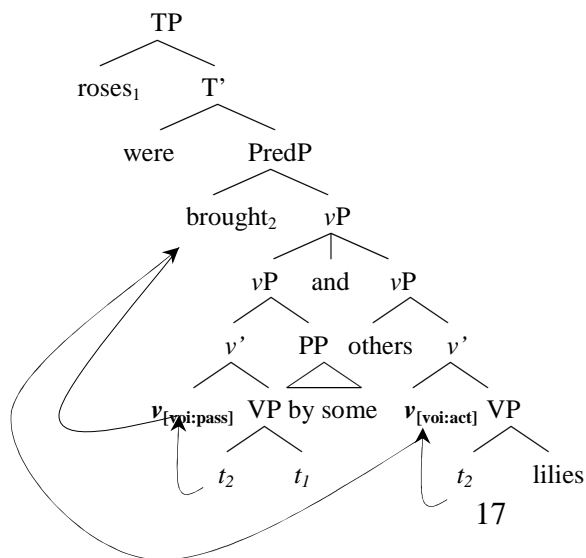
66) a. \* Roses were brought by some and others ~~brought~~ lilies.

b.

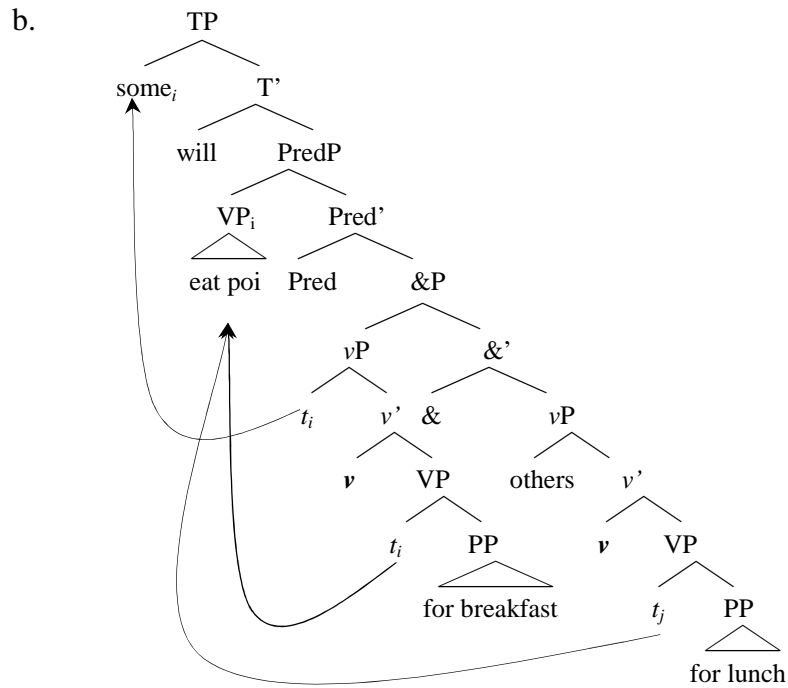


67) a. \* Roses were brought by some and others ~~brought~~ lilies.

b.

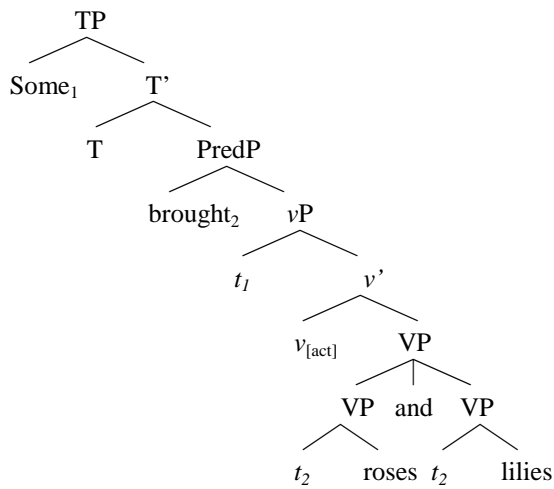


68) a. Some will eat poi for breakfast and others ~~will eat poi~~ for lunch.



◦ *v* above the coordination level?

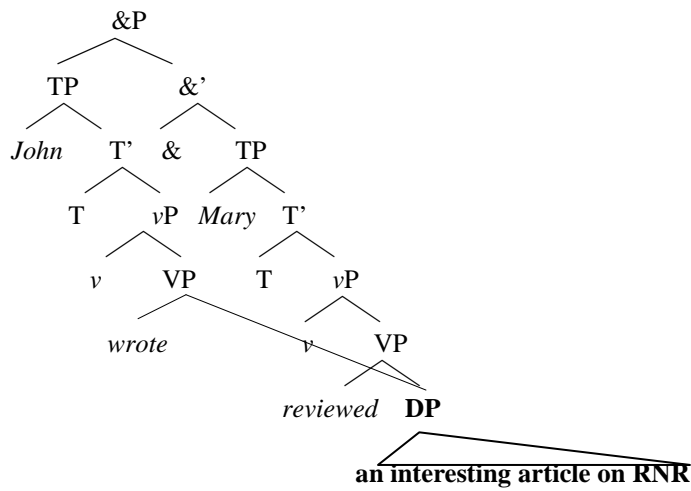
69) a. Some brought roses and others ~~brought~~ lilies.



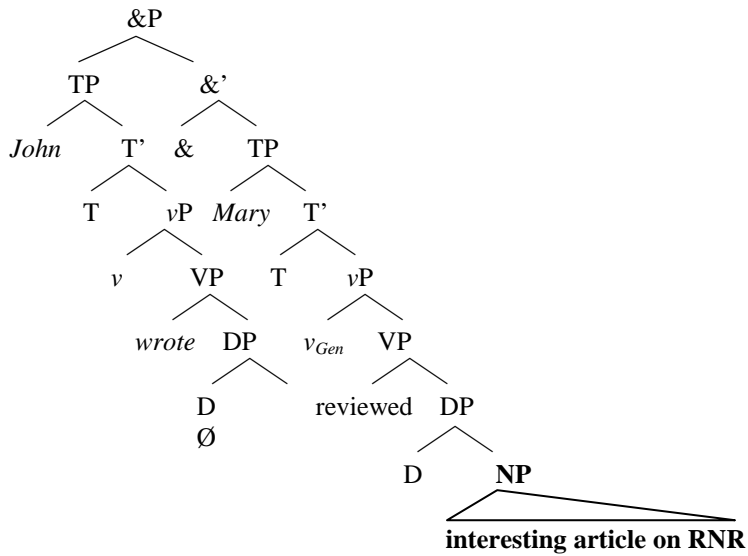


72) a. John wrote \_\_\_ and Mary reviewed *an interesting article on RNR*.

b.

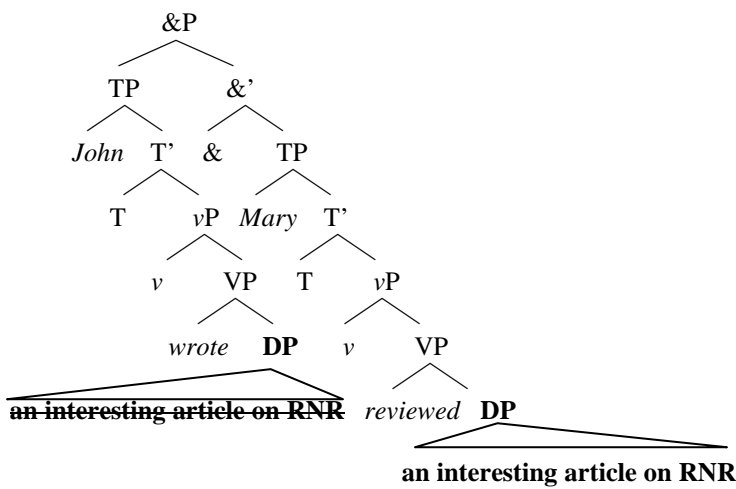


c.



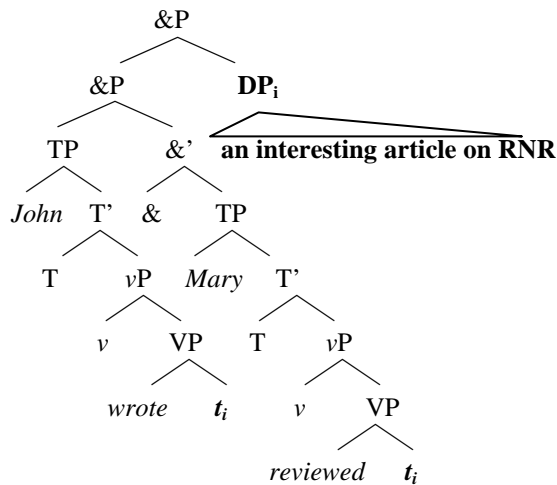
B. Ellipsis: (Hartmann 2000, Ha 2006)

73)



C. ATB-movement (Postal 1988, Ross 1967, Sabbagh 2007, among others)

74)



Review arguments against ellipsis and movement accounts of RNR  
 Point out one potential problem for a multidominance account  
 Show how less sharing solves this problem

3.2 Problems for Movement Accounts

A. insensitivity to islands:

- 75) a. John asked when Bill wrote \_\_\_ and Mary wondered when LI will review *Sue's new article on right node raising*.  
 b. Mary read a book that praised \_\_\_ and John read an article that criticized *ellipsis accounts of RNR*.
- 76) a. \* *What<sub>i</sub>* did John ask when Bill wrote *t<sub>i</sub>*?  
 b. \* *What<sub>i</sub>* did Mary read a book that praised *t<sub>i</sub>*?

B. preposition stranding

- 77) a. \* *Bhí mé ag éisteacht le \_\_\_ inné clár mór fada ar an ráidió*  
 was I listen.prog with yesterday program great long on the radio  
*faoin toghachán.*  
 about-the election  
 'I was listening yesterday to a great long program on the radio about the election.'  
 (McCloskey 1986:185)
- b. *Níl sé in aghaidh an dlí a thuilleadh bheith ag éisteacht le \_\_\_ nó*  
 is-not it against the law anymore be(-fin) listen.prog with or  
*ag breathnú ar ráidió agus teilifís an Iarthair*  
 look.prog on radio and television the West.gen  
 'It is no longer against the law to listen to, or to watch, Western radio and television.'  
 (McCloskey 1986:184)

**C. Binding**

- 78) a. Gina<sub>j</sub> liked \_\_ but Sue<sub>i</sub> disliked *this picture of herself<sub>i/j</sub>*  
 b. Andy<sub>j</sub> liked \_\_ but Sue<sub>i</sub> disliked *this picture of herself<sub>i</sub>*.  
 c. ?? Andy<sub>j</sub> liked \_\_ but Sue<sub>i</sub> disliked *this picture of himself<sub>j</sub>*.
- 79) \* Sue<sub>i</sub> liked but Gina<sub>j</sub> disliked this picture of her<sub>j/i</sub>.
- 80) a. \* She<sub>1</sub> talked to \_\_ and he married *a student that Mary<sub>1</sub> knew*.  
 b. \* He married \_\_ and she<sub>i</sub> talked to *a student that Mary<sub>1</sub> knew*. (Johnson 2007:16)

**D. Quantifier binding**

- 81) a. Everyone<sub>j</sub> knows \_\_ but nobody<sub>i</sub> likes the idea that *he<sub>i/j</sub>* has to die at some point. (based on Hartmann 2000:74)  
 b. Every<sub>i</sub> student rejected \_\_ and every<sub>j</sub> professor continued to defend *the analysis they<sub>i+j</sub>* collaborated on. (Vos and Vicente 2005:101)

**E. Negative polarity item licensing**

- 82) She couldn't talk to \_\_, and he wouldn't talk to *anyone with green hair*. (Johnson 2007:17)

3.3 *Problems for Ellipsis Accounts*

**A. Scope**

- 83) a. John knows someone who speaks \_\_ and Bill knows someone who wants to learn *every Germanic language*. ( $\exists > \forall, \forall > \exists$ )  
 b. John knows someone who speaks *every Germanic language*, and Bill knows someone who wants to learn *every Germanic language*. ( $\exists > \forall, * \forall > \exists$ ) (Sabbagh 2007: 367)
- 84) a. John sang \_\_ and Mary recorded *two quite different songs*. (Abels 2004:51)  
 b. John sang *two different songs* and Mary recorded *two different songs*.

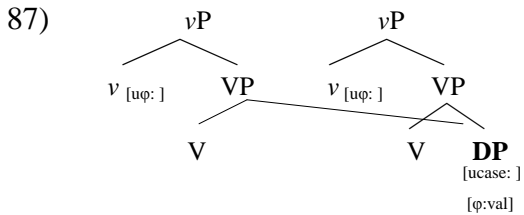
**B. Differences between RNR and nominal ellipsis**

- 85) a. Jan używa \*(pieć noży). [Polish]  
 Jan uses five knives  
 'Jan uses five knives.'
- b. A: Pożycz mi noża.  
 lend me knife  
 'Lend me a knife.'
- B: Nie mogę, teraz ja \*(go) używam.  
 not able now I it use  
 'I can't: I'm using it now.'

- 86) Jan używa \_\_\_ a Maria ogląda pięć noży.  
 Jan uses and Maria looks-at five knives  
 ‘Jan is using and Maria is looking at five knives

3.4 (Potential) Problem for a Parallel Merge Account

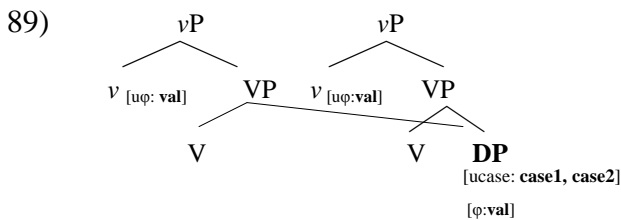
• Case



- 88) a.  $P_{u\phi} > G_{uCase, \phi}$  Agree  
 Agree (P, G) where P is a Probe and G a matching goal, “>” is a command relation and  $u\phi$  of P and  $uCase$  of G are valued. (Hiraiwa 2005:37)

- b.  $P_{u\phi} > G_{uCase, \phi}, G_{uCase, \phi}$  Multiple Agree

- c.  $P_{u\phi}, P_{u\phi} > G_{uCase, \phi}$  Multiple Agree



• Case matching in ATB wh-questions

- 90) a. \* *Czego* Maria kupiła a Jan szuka? [Polish]  
 what.GEN Maria bought<sub>ACC</sub> and Jan seeks<sub>GEN</sub>  
 ‘What did Maria buy and Jan is looking for?’
- b. \* *Co* Maria kupiła a Jan szuka?  
 what.ACC Maria bought<sub>ACC</sub> and Jan seeks<sub>GEN</sub>  
 ‘What did Maria buy and Jan is looking for?’
- c. \* *Co* Jan szuka a Maria kupiła?  
 what.ACC Jan seeks<sub>GEN</sub> and Maria bought<sub>ACC</sub>  
 ‘What is Jan looking for and Maria bought?’

- d. \* *Czego* Jan szuka a Maria kupiła?  
 what.GEN Jan seeks<sub>GEN</sub> and Maria bought<sub>ACC</sub>  
 ‘What is Jan looking for and Maria bought?’

• Case (mis)matches in RNR constructions (proximity effect):

91) a. Maria kupiła a Jan szuka *nowego samochodu*.  
 Maria bought<sub>ACC</sub> and Jan looks-for<sub>GEN</sub> new.GEN car.GEN  
 ‘Maria bought and Jan is looking for a new car.’

b. \* Maria kupiła a Jan szuka *nowy samochód*.  
 Maria bought<sub>ACC</sub> and Jan looks-for<sub>GEN</sub> new.ACC car.ACC  
 ‘Maria bought and Jan seeks a new car.’

92) a. Jan szuka a Maria kupiła *nowy samochód*.  
 Jan looks-for<sub>GEN</sub> a Maria bought<sub>ACC</sub> new.ACC car.ACC  
 ‘Jan is looking for and Maria bought a new car.’

b. \* Jan szuka a Maria kupiła *nowego samochodu*.  
 Jan looks-for<sub>GEN</sub> and Maria bought<sub>ACC</sub> new.GEN car.GEN  
 ‘Jan is looking for and Maria bought a new car.’

93) a. ? Johannes kannte und Marie vertraute *dem Mann*. [German]  
 Johannes knew<sub>ACC</sub> and Marie trusted<sub>DAT</sub> the.DAT man  
 ‘Johannes knew and Marie trusted the man.’

b. \* Johannes kannte und Marie vertraute *den Mann*.  
 Johannes knew<sub>ACC</sub> and Marie trusted<sub>DAT</sub> the.ACC man  
 ‘Johannes knew, and Marie trusted, the man’

94) a. ? Marie vertraute und Johannes kannte *den Mann*.  
 Marie trusted<sub>DAT</sub> and Johannes knew<sub>ACC</sub> the.ACC man  
 ‘Marie trusted, and Johannes knew, the man’

b. \* Marie vertraute und Johannes kannte *dem Mann*.  
 Marie trusted<sub>DAT</sub> and Johannes knew<sub>ACC</sub> the.DAT man  
 ‘Marie trusted and Johannes knew the man.’

(Larson 2007:19)

• Similar contrast in relative clauses:

95) a. \* Maria szuka *co(kolwiek)* Jan gubi. [Polish]  
 Maria looks-for<sub>GEN</sub> whatever.ACC Jan loses<sub>ACC</sub>  
 ‘Maria looks for whatever Jan loses.’

b. \* Maria szuka *czego(kolwiek)* Jan gubi.  
 Maria looks-for<sub>GEN</sub> whatever.GEN Jan loses<sub>ACC</sub>  
 ‘Maria looks for whatever Jan loses.’

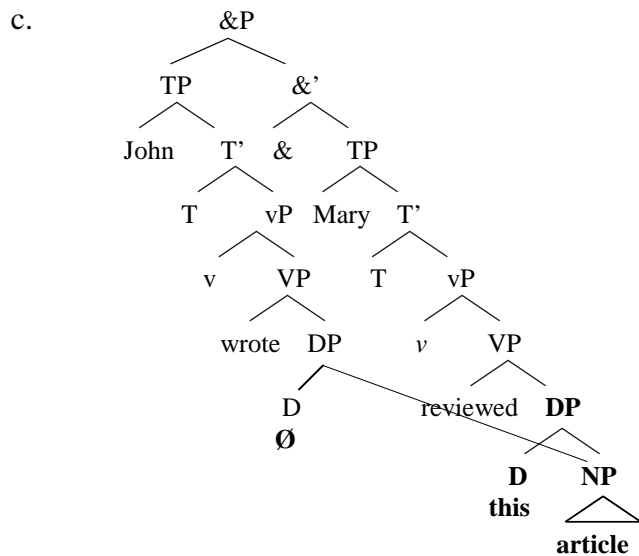
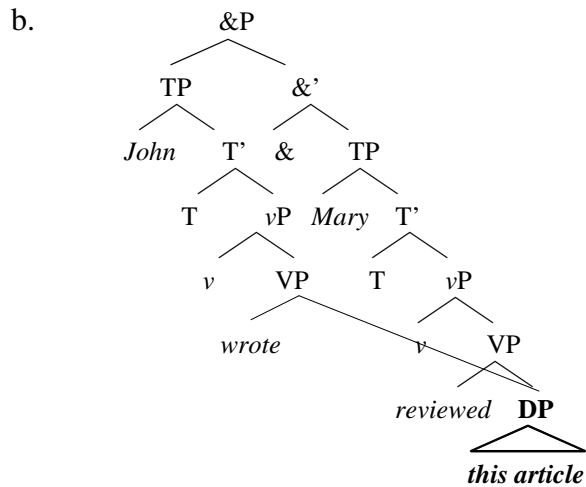
96) Maria szuka tego zegarka, który Jan zgubił.  
 Maria looks-for<sub>GEN</sub> this.GEN car.GEN which.ACC Jan lost<sub>ACC</sub>  
 'Maria is looking for the watch that Jan lost.'

- Both free and headed relatives involve promotion of the head;
  - in free relatives, the entire DP undergoes promotion → case matching required
  - in headed relatives, only the NP undergoes promotion → case mismatches allowed.

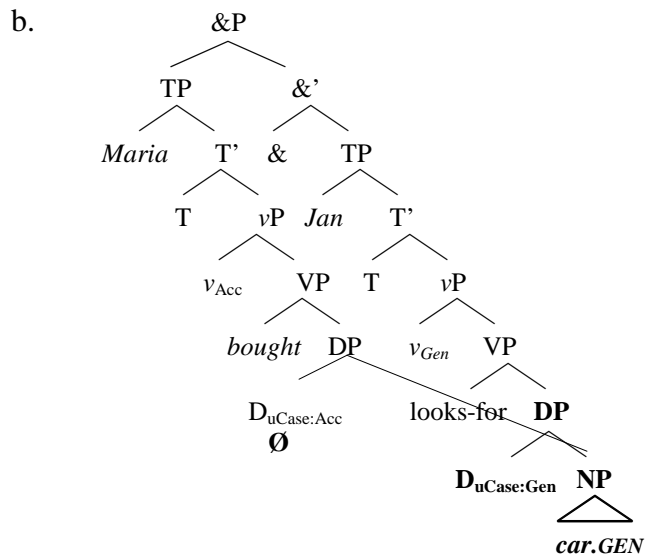
97) a. [TP Maria looks for [DP *whatever*<sub>i</sub> [CP Jan loses *t*<sub>i</sub> ] ] ]  
 b. [TP Maria looks for [DP the [NP *watch*]<sub>j</sub> [CP [DP *which* *t*<sub>j</sub> ]<sub>i</sub> Jan lost *t*<sub>i</sub> ] ] ]

- One D → case matching required
- Two Ds → case mismatches allowed

98) a. John wrote \_\_ and Mary reviewed *this article*.



- 99) a. Maria kupiła a Jan szuka samochodu.  
 Maria bought<sub>ACC</sub> and Jan looks-for<sub>GEN</sub> car.GEN  
 ‘Maria bought and Jan is looking for a car.’



- 100) Maria kupuje nowe a Jan szuka używanych samochodów.  
 Maria buys<sub>ACC</sub> new.ACC and Jan looks-for<sub>GEN</sub> used.GEN cars.GEN  
 ‘Maria buys new and Jan is looking for used cars.’

- 101) a. Maria kupiła pięć a Jan sprzedał trzy samochody.  
 Maria bought<sub>ACC</sub> five.ACC and Jan sold<sub>ACC</sub> three.ACC cars.ACC  
 ‘Mary bought five and Jan sold three cars.’

- b. Maria kupiła trzy a Jan sprzedał pięć samochodów.  
 Maria bought<sub>ACC</sub> three.ACC and Jan sold<sub>ACC</sub> five.ACC cars.GEN  
 ‘Maria bought three and Jan sold five cars.’

- 102) Types of numerals in Polish (based on Rutkowski and Maliszewska 2007)

Type	A-numeral	Q-numeral	N-numeral
Examples	jeden ‘one’ dwa ‘two’ trzy ‘three’ cztery ‘four’	pięć ‘five’ szesć ‘six’ siedem ‘seven’ etc	tysiąc ‘thousand’ million ‘million’ miliard ‘billion’
Properties	agree in case with nouns	agree with nouns in inherent case contexts; assign genitive case in structural case contexts	always assign genitive case

- 103) a. \* Jan szuka a Maria kupiła nowych samochodów.  
 Jan looks-for<sub>GEN</sub> and Maria bought<sub>ACC</sub> new GEN cars.GEN  
 ‘Jan is looking for and Maria bought new cars.’

- b. Jan szuka trzech a Maria kupiła pięć nowych samochodów.  
 Jan looks-for<sub>GEN</sub> three.GEN and Maria bought five<sub>GEN</sub> new.GEN cars.GEN  
 ‘Jan is looking for three and Maria bought five new cars.’

• Empty nominal alternative:

- 104) a. Jan szuka trzech  $\emptyset$  a Maria kupiła pięć nowych samochodów.  
 Jan looks-for.GEN three.GEN and Maria bought five.ACC new.GEN cars.GEN  
 ‘Jan is looking for three and Maria bought five new cars.’
- b. Jan szuka trzech  $\emptyset$ .  
 Jan looks-for.GEN three.GEN  
 ‘Jan is looking for three ones.’

Sensitivity of RNR to right edges:

- 105) *Right Edge Restriction* (Sabbagh 2007:356)

In the configuration: [ [A...X] Conj [B...X] ]

X must be rightmost within A and B before either

- (i) X can be deleted from A;
- (ii) X can be rightward ATB-moved; or
- (iii) X can be multiply dominated by A and B.

- 106) a. I [VP invited into my house \_\_ ] and [VP congratulated *all the winners*]  
 b. \* I [VP gave \_\_ a present] and [VP congratulated *all the winners*] (Wilder 1999:587)  
 c. \*? [TP I congratulated \_\_ ] and [TP Mary will give *all the winners* a present]

- 107) Maria kupiła nowy  $\emptyset$  w poniedziałek.  
 Maria bought new on Monday  
 ‘Maria bought a new one on Monday.’

- 108) a. [TP Maria kupiła nowy \_\_ ] a [TP Jan szukał używanego samochodu]  
 Maria bought<sub>ACC</sub> new.ACC and Jan looked.for.GEN used.GEN car.GEN  
 ‘Maria bought a new and Jan looked for a used car.’

- b.\* [TP Maria kupiła nowy \_\_ w poniedziałek] a [TP Jan szukał używanego  
 Maria bought<sub>ACC</sub> new.ACC on Monday and Jan looked.for.GEN used.GEN  
*samochodu* we wtorek]  
 car.GEN on Tuesday  
 ‘Maria bought a new car on Monday and Jan looked for a used car on Tuesday.’

- c.\* [TP Maria kupiła nowy \_\_ w poniedziałek] a [TP Jan szukał używanego  
 Maria bought<sub>ACC</sub> new.ACC on Monday and Jan looked.for.GEN used.GEN  
*samochodu*]  
 car.GEN  
 ‘Maria bought a new car on Monday and Jan looked for a used car.’

d. ?? [TP Maria kupiła      nowy \_\_\_ ] a [TP Jan szukał                      używanego  
Maria bought<sub>ACC</sub> new.ACC                      and      Jan looked.for.<sub>GEN</sub> used.GEN  
samochodu we wtorek]  
car.GEN      ON TUESDAY  
'Maria bought a new car on Monday and Jan looked for a used car.'

## 4. Conclusions

- A *Parallel Merge* approach to Gapping:
  - both V and *v* shared
  - voice mismatches
- A *Parallel Merge approach* to Right Node Raising:
  - NP (rather than DP) sharing
  - case mismatches

## References

- Abels, Klaus. 2004. 'Right Node Raising: Ellipsis or Across the Board Movement?' Proceedings of NELS 34, ed by Moulton, Keir; Wolf, Matthew. GLSA , 45-59.
- Ackema, Peter and Krista Szendroi 2002. Determiner sharing as an instance of dependent ellipsis. *Journal of Comparative Germanic Linguistics* 5, 3-34
- Bachrach, Asaf, and Roni Katzir. 2007 'Spelling out QR.' In E. Puig-Waldmüller (ed.) Proceedings of Sinn und Bedeutung 11, pp. 63-75
- Bachrach, Asaf, and Roni Katzir. (to appear). 'Right-Node Raising and Delayed Spellout,' In K. Grohmann (ed.), *InterPhases: Phase-Theoretic Investigations of Linguistic Interfaces*. Oxford University Press.
- Bošković, Željko and Steven Franks. 2000. Across-the-Board Movement and LF. *Lingua* 3: 107-129.
- Baker 1989
- Cho, Sungeun. and Xuan Zhou. 2002. 'The interpretations of wh-elements in conjoined wh-questions,' *Japanese/Korean Linguistics* 10, ed. by Akatsuka, Noriko and Susan Strauss. Stanford: CSLI Publications: pp.522-531.
- Chomsky, Noam. 2001. *Beyond Explanatory Adequacy*. MIT Occasional Papers in Linguistics 20.
- Citko, Barbara. 2000. *Parallel Merge and the syntax of free relatives*. Ph.D. thesis. Stony Brook University.
- Citko, Barbara. 2005. 'On the Nature of Merge: External Merge, Internal Merge, and Parallel Merge,' *Linguistic Inquiry* 36:475-497.
- Citko, Barbara. 2006. 'On the Interaction between ATB Wh-Movement and Left Branch Extraction,' *Syntax* 9(3): 225-247.
- Citko, Barbara. 2007. 'Determiner Sharing from a Crosslinguistic Perspective,' In *Linguistic Variation Yearbook 2006*, ed. by P. Pica, Amsterdam: John Benjamins, 73-96.
- Citko, Barbara. 2008. *How and Why Do Questions Linearize?.* Talk given at the GLOW Workshop on Linearization. Newcastle, England.
- Collins, Chris. 1997. Argument Sharing in Serial Verb Constructions. *Linguistic Inquiry*. 28:461-497.
- Coppock, Elizabeth. 2001. Gapping: in defense of deletion. In Proceedings of the Chicago Linguistics Society 37, ed. Mary Andronis, Christopher Ball, Heidi Elston, and Sylvain Neuvel, 133–148. University of Chicago.
- Goodall, Grant. 1983. A Three-Dimensional Analysis of Coordination. In *Chicago Linguistic Society* 19:146-154.
- Goodall, Grant. 1987. *Parallel Structures in Syntax*. Cambridge: Cambridge University Press.
- Gracanin-Yukse, Martina. 2007. *On Sharing*. Ph.D. thesis. Massachusetts Institute of Technology.
- Ha, Seungwan. 2006. Multiple Dominance CAN'T, but Ellipsis CAN account for Right Node Raising. Proceedings of the 42nd Chicago Linguistic Society (CLS 42). Chicago University Press.
- Hale, Ken. 1991. Misumalpan verb sequencing. In C. Lefebvre, ed., *Serial Verbs: Grammatical, Comparative and Cognitive Approaches*. Amsterdam/Philadelphia: John Benjamins, pages 1–36.
- Hankamer, Jorge, and Ivan Sag. 1976. Deep and surface anaphora. *Linguistic Inquiry* 7.3:391-428.
- Hardt, Daniel. 1993. *Verb Phrase Ellipsis: Form, Meaning and Processing*. Doctoral Dissertation, University of Pennsylvania.
- Hartmann, Katerina. 2000. *Right Node Raising and Gapping: Interface Conditions on Prosodic Deletion* John Benjamins Publishing Company.

*Ways of Structure Building, University of the Basque Country, Vitoria-Gasteiz, Nov 13-14, 2008.*

- Hiraiwa, Ken, and Adams Bodomo. 2008. Object-Sharing as Symmetric Sharing: Evidence from Dàgáàrè. Proceedings of the 26th West Coast Conference on Formal Linguistics, ed. Charles B. Chang and Hannah J. Haynie, 243-251. Somerville, MA: Cascadilla Proceedings Project.
- Johnson, Kyle. 1996/2003. 'In search of the middle field,' Unpublished manuscript, University of Massachusetts, Amherst.
- Johnson, Kyle. 2000. 'Few dogs eat Whiskas or cats Alpo,' in UMOP 23: Issues in semantics and its interface, Kiyomi Kusumoto and Elisabeth Villalta (eds.), pp. 59-82.
- Johnson, Kyle. to appear. 'Gapping is not (VP) ellipsis,' Linguistic Inquiry.
- Larson, Bradley. 2007. In or ex-situ: a diagnosis of right node raising. University of Washington undergraduate honors thesis.
- Levine, Robert D. 1985. Right Node (non)-Raising. Linguistic Inquiry 16:492-497.
- Lin, Vivian. 2000. 'Determiner sharing,' In R. Billerey and B. D. Lillehaugen (eds.), Proceedings of the 19th West Coast Conference on Formal Linguistics. Somerville, MA: Cascadilla Press.
- McCawley, James. 1982. Parentheticals and Discontinuous Constituent Structure. Linguistic Inquiry 13:91-106.
- McCawley, James. 1988. The Syntactic Phenomena of English. Chicago: Chicago University Press.
- McCawley, James. D. 1993. 'Gapping with shared operators,' In Berkeley Linguistics Society, 245-253. Berkeley, California.
- McCloskey, James. 1986. Right node raising and preposition stranding. Linguistic Inquiry 17:183-186.
- Merchant, Jason. 2008. 'An asymmetry in voice mismatches in VP ellipsis and pseudogapping,' Linguistic Inquiry 39:169-179.
- Postal, Paul M. 1998. Three investigations of extraction. Cambridge: The MIT Press.
- Potsdam, Eric. 1997. English Verbal Morphology and VP Ellipsis. In *The Proceedings of the 27th Meeting of the North East Linguistic Society*. Amherst, Ma.: GLSA, University of Massachusetts at Amherst, 353-368.
- Rutkowski, Paweł and Hanna Maliszewska. 2007. On prepositional phrases inside numeral phrases in Polish. *Lingua* 117: 784-813.
- Sabbagh, Joseph. 2007. Ordering and Linearizing rightward movement. *Natural Language and Linguistic Theory* 25:349-401
- Sag, Ivan. 1976. Deletion and logical form. Doctoral Dissertation, Massachusetts Institute of Technology.
- Siegel, Muffy. 1984. 'Gapping and interpretation,' Linguistic Inquiry 15, 523-530.
- Warner, Anthony R. 1985. *The Structure of English Auxiliaries: A Phrase Structure Grammar*. Bloomington, Ind.: Indiana University Linguistics Club.
- Warner, Anthony R. 1993. *English Auxiliaries: Structure and History*. Cambridge: Cambridge University Press.
- Wilder, Chris. 1999. Right Node Raising and the LCA. In S. Byrd, A. Carnie, J.D. Haugen, and P. Norquest (eds.) Proceedings of the 18th West Coast Conference on Formal Linguistics, 586-596. Somerville, Mass.: Cascadilla Press.
- Wilder, Chris. 2008. Shared constituents and linearization. In *Topics in ellipsis*, ed. Kyle Johnson. Cambridge University Press, pp. 229-258.
- Vos, de Mark and Luis Vicente. Coordination under Right Node Raising. Proceedings of the 24th West Coast Conference on Formal Linguistics, ed. John Alderete et al., 97-104. Somerville, MA: Cascadilla Proceedings Project.
- Vries, de. Mark. 2007. Internal and External Reemerge: On Movement, Multidominance, and the Linearization of Syntactic Objects. Manuscript, University of Groningen.
- Williams, Edwin. 1978. Across-the-board rule application. Linguistic Inquiry 9:31-43.

University of Washington  
Department of Linguistics  
Box 354340  
Seattle, WA 98195-4340  
USA  
<http://faculty.washington.edu/bcitko/>  
email: bcitko@u.washington.edu