ON RIGHT NODE RAISING[1]

ATAKAN INCE
Department of Linguistics, University of Maryland

1. Aim

The aim of this study is to offer evidence from Right Node Raising structures in Turkish for **Right Node Raising (RNR) as (PF-)Ellipsis** (Wexler and Culicover 1980; Levine 1985, 2001; Kayne 1994) rather than **RNR as ATB movement** (Ross 1967; Bresnan 1974; Hankamer 1971; Hudson 1976) or **RNR as Multiple Dominance** (Phillips 1996; Wilder 1999, 2008).

2. Right Node Raising Data

Crucial data will be RNR structures where the shared element is a verb –known as **backward gapping** (Hankamer 1971)- as well as an argumental DP. An example of RNR where the shared element is a verb (1) (Hankamer 1971; Kornfilt 2000), and where the shared element is DO (2):

1. [[Hasan karides-i __], [Mehmet te istiridye-yi yedi]]
   Hasan shrimp-ACC Mehmet also oyster-ACC ate
   'Hasan (ate) the shrimp, and Mehmet ate the oyster.'

2. Mehmet ___$_1$ pişirdi , Hasan da ____$_1$ yedi , elma-yı.
   cooked also ate apple-ACC
   'Mehmet cooked and Hasan ate, the apple.'

In (1), the verb *yedi* 'ate' is the verb of both clauses. However, it is pronounced in sentence/ conjunction-final position. In (2), the shared element is the DO of both conjuncts, and it is pronounced in sentence/conjunction-final position.

[1] I would like to thank Aslı Göksel, Norbert Hornstein, Jaklin Kornfilt, Howard Lasnik, Jason Merchant, Andrew Simpson, Alexander Williams, Masaya Yoshida for their questions and comments and Reiko Vermeulen for her editorial assistance.

2.1 Differences between 'Backward Gapping' and 'Forward Gapping'

The first difference between forward and backward gapping is that forward gapping cannot occur in complement clauses (3a) –it can occur in matrix clauses, but backward gapping can occur in complement clauses (4). If backward gapping had the same derivation as forward gapping, the same restriction of 'gapping as root phenomenon' (Ince, in press) would be expected on backward gapping:

3. a. *Ahmet [[Hasan-ın çikota-yı yediğini] [Mehmet-in (de) armud-u]] biliyor.
-GEN chocolate-ACC ate -GEN also pear-ACC knows
'Ahmet knows that Hasan ate the chocolate and Mehmet the pear'
b. Hasan çikota-yı yedi, Mehmet (de) armud-u.
chocolate-ACC ate also pear-ACC
'Hasan ate the chocolate, and Mehmet the pear.'

4. Ahmet [[Hasan-ın çikolata-yı] [Mehmet-in (de) armud-u yediğini]] biliyor.
-gen chocolate-acc -gen also pear-acc ate knows
'Ahmet knows that Hasan ate the chocolate and Mehmet the pear'

The second difference is that forward gapping does not require parallel word order, whereas backward gapping requires parallel word order ((5), (6a-b), (7) and (8a-b) from Bozşahin, 2000):

5. Backward gapping
a. SO & SOV b.OS & OSV
c. *SO & OSV d. *OS & SOV

6. a. Adam kitabı , çocuk da dergiyi okudu. (SO & SOV)
man book-ACC child CONJ mag.-ACC read-PAST
'the man read the book, and the child, the magazine.'
b. Kitabı adam , dergiyi de çocuk okudu. (OS & OSV)
book-ACC man mag.-ACC CONJ child read-PAST
'the man read the book, and the child, the magazine.'
c. *Adam kitabı , dergiyi de çocuk okudu. (*SO & OSV)
man book-ACC mag.-ACC CONJ child read-PAST
d. *Kitabı adam , çocuk da dergiyi okudu. (*OS & SOV)
book-ACC man child CONJ mag.-ACC read-PAST

7. a. SOV & SO b. OSV & OS
c. SOV & OS d. OSV & SO

8. a. Adam kitabı okudu , çocuk da dergiyi. (SOV & SO)
man book-ACC read-PAST child CONJ mag.-ACC
'the man read the book, and the child, the magazine.'
b. Kitabı adam okudu , dergiyi de çocuk. (OSV & OS)
book-ACC man read-PAST mag.-ACC CONJ child
c. Adam kitabı okudu , dergiyi de çocuk. (SOV & OS)
man book-ACC read-PAST mag.-ACC CONJ child

d. Kitabı adam okudu , çocuk da dergiyi. (OSV & SO)
book-ACC man read-PAST child CONJ mag.-ACC

If both forward and backward gapping had the same derivation, one would not expect the word order parallelism in backward gapping. So, I follow Hankamer (1971) and assume that backward gapping structures are Right Node Raising structures. However, it is not clear yet why word order parallelism is required in backward gapping, and I will leave it as an open issue.

3. ANALYSES OF RNR

Analyses of RNR structures can be grouped into two classes:

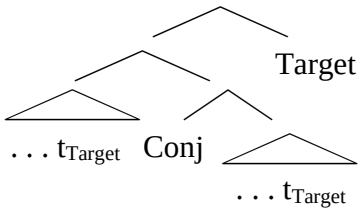
9. In-Situ analyses: Shared Element(s) Inside Both Conjuncts
   a. PF-deletion (Wexler and Culicover 1980; Levine 1985, 2001; Kayne 1994; Wilder 1997; Hartmann 2000)
   b. Multiple Dominance (Wilder 1998, 2008; Abels 2004)

   Ex-Situ analyses: Shared Element(s) Outside Both Conjuncts Across-the-Board Movement (Ross 1967; Bresnan 1974; Hudson 1976; Postal 1974, 1998; Hankamer 1971; Sabbagh 2007)

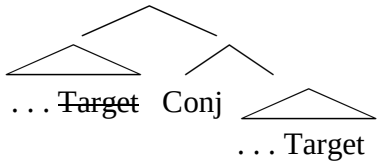
Under RNR as ATB movement, on the other hand, an element is ATB-moved rightward (10b); under RNR as ellipsis, the leftmost one of two identical elements is elided (10c) (10b-c taken from Abels 2004); and under RNR as Multiple Dominance, the shared element is first-merged once and becomes the argument of both verbs (10d):

10. a. John bought and Mary broke an expensive Chinese vase.

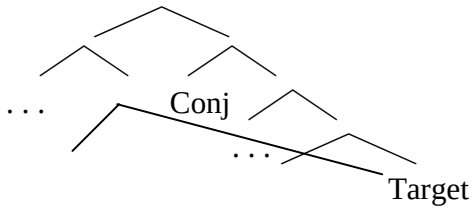
b.



c.



d.



4. Arguments against RNR as 'ATB-Movement' and 'Multiple Dominance' from Turkish

In this section, I will give four arguments against the 'ATB-movement' and 'Multiple Dominance' analyses of RNR from RNR structures in Turkish.

4.1 Agreement Properties

The shared verb shows agreement only with the Subject of the second conjunct in Turkish RNR structures:

11. Sen elma-yı , ben armud-u ye-di-**m**/n*/*k.
    you apple-ACC I pear-ACC eat-PST-1S/*2S/*1P
    'You (ate) the apple, and I ate the pear.'

The pronounced copy of *ye-* 'eat' in the first conjunct would bear second person singular agreement, while the verb in the second conjunct would bear first person singular agreement:[2]

12. Sen elma-yı ye-di-**n** , ben armud-u ye-di-**m.**
    you apple-ACC eat-PST-2S I pear-ACC eat-PST-1S
    'You ate the apple, and I ate the pear.'

Under ATB-movement analysis, since both of the verbs move, it is not clear why only the verb that agrees with the second Subject is pronounced although both verbs are ATB-moved. There would be nothing to block pronunciation of the copy of the verb from the first conjunct under RNR as ATB movement.

ATB-MOVEMENT

13. Sen elma-yı ye-di-**n** , ben armud-u ye-di-**m** _____ (LANDING SITE)
    you apple-ACC eat-PST-2S I pear-ACC eat-PST-1S
    'You (ate) the apple, and I ate the pear.'

One cannot argue that the verb agrees with the Subject of the second conjunct after it ATB-moves because there would be no c-command relation between the Subject of the second conjunct and the verb since the verb is outside the domain of the second conjunct (10b-14). So, neither Spec-Head agreement would work nor the AGREE operation would work to explain the relevant agreement fact:

[2]The fact that the verbs in the first and second conjuncts are not identical w.r.t agreement shows that there is not a strict identity requirement. However, both verbs need to be identical in Tense/Aspect/Modality morphology:

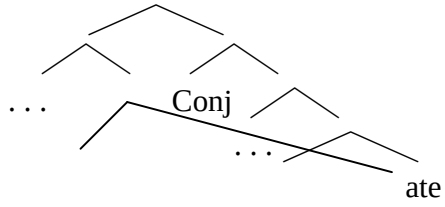
(i) Ali çikolatayı *(yi-yor) / ~~ye-di~~, ben elma-yı ye-di-m.
    chocolate eat-PROG ate I apple eat-PAST-1S
(ii) Ali çikolatayı *(ye-meli) / ye-sin , ben elma-yı y-iye-yim.
    chocolate eat-NECESSITY eat-OPT2S I apple eat-OPTATIVE-1S

14. [[$_{\&1}$ Sen . . . ___$_1$] [$_{\&2}$ ben . . . ____$_1$]] yedim$_1$

NO C-COMMAND

Similarly, under Multiple Dominance analysis, since the verb is shared by both clauses, it is not clear why it shows only agreement with the second clausal conjunct. Since locality or linear precedence does not matter in this model, the verb could agree with the Subject of the first conjunct as well as it could with the Subject of the second conjunct:

15.



4.2 Head-adjunction to a phrase

Since the shared element in RNR structures can be a head, it is not clear how a head would adjoin to a phrase under ATB analyses:

16. [$_{\&P}$ [[$_{\&1}$ . . . ___$_1$] [$_{\&2}$ . . . ___$_1$]] V^o_1] HEAD-ADJUNCTION TO A PHRASE

In the following lines, we will see contexts where a shared element can be a head but not a phrase, which would not be expected under the ATB-analysis.

4.3 Adjunction to complement clauses

A verb can be shared in complement clauses (17). Under ATB movement analysis, this would mean that the verb adjoins to the conjunction -which is embedded. However, rightward adjunction to complement clauses is ungrammatical (18):

17. Zeynep [[[Hasan-ın karides-i , Mehmed-in de istiridye-yi
Zeynep Hasan-GEN shrimp-ACC Mehmet-GEN also oyster-ACC
yediğini] duydu
ate heard
'Zeynep heard that Hasan (ate) the shrimp, and Mehmet ate the oyster.'

18. *Ahmet [[Ali-nin t_1 öptüğünü] Ayşe-yi$_1$] biliyor.
-GEN kissed -ACC knows
'Ahmet knows that Ali kissed Ayşe.'

If RNR were ATB movement, example (17) would be bad since complement clauses do not allow rightward adjunction:

19. Zeynep [$_{\&P}$[[Hasan-ın . . . . ____$_1$] [Mehmed-in . . . ____$_1$]] **yediğini**$_1$]biliyor

ADJUNCTION NOT LICENSED

One could not argue that ATB can license rightward adjunction to complement clauses. This would predict that a DO could be shared in complement clauses as well. However, a DO cannot be shared in complement clauses:

20. **pro* [[[Mehmet-in ___$_1$ pişirdiğini], [Hasan-ın da ____$_1$ ye-diğini]] elma-y$ı_1$]
-GEN cooked -GEN also ate apple-ACC
biliyorum.
know
'I know that Mehmet cooked and Hasan ate, the apple.'

21. *. . . [$_{\&P}$ [$_{\&P}$ . . . ___$_1$ . . . . ____$_1$ . . .] DO_1] V^o_{matrix}

However, RNR of a DO is grammatical in matrix clauses:

22. Mehmet ___$_1$ pişirdi, Hasan da ____$_1$ ye-di, elma-yı.
cooked also ate apple-ACC
'Mehmet cooked and Hasan ate, the apple.'

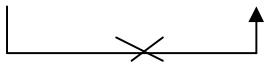
In (22), it is not the case that there is a null pronoun *pro* in the first conjunct co-indexed with the DO of the second conjunct because *pro* in the first conjunct would also be licensed when the DO in the second conjunct is in its **canonical** position:

23. *Mehmet *pro*$_1$ pişirdi , Hasan da elma-y$ı_1$ yedi.
cooked also apple-ACC ate
'Mehmet cooked and Hasan ate the apple.'

Example (20) would not be problematic for Multiple Dominance analysis: if an element is shared from its canonical position, (20) could be accounted for in terms of the 'ban against rightward-adjunction to complement clauses', which would mean that movement obligatorily follows after an element is 'multiply shared':

MULTIPLE DOMINANCE
DOMAIN

24. . . . [$_{\&P}$ [$_{\&P}$ . . . ___$_3$ . . . V_1 . . . V_2] DP_3] . . . V^o_{matrix}



4.4 Long-distance RNR

Another problem for ATB-movement is that a shared DO in complement clauses can occur at the right periphery of the matrix clause (25a), whereas a shared verb in complement clauses cannot occur in the right periphery of the matrix clause (25b):

25. a. [[*pro* [[Mehmet-in ___$_1$ pişirdiğini], [Hasan-ın da ____$_1$ ye-diğini]]
-GEN cooked -GEN also ate

biliyorum] elma-yı$_1$].
know apple-ACC
'I know that Mehmet cooked and Hasan ate, the apple.'

b. **pro* [Hasan-ın karides-i ___$_1$, Mehmed-in de istiridye-yi ___$_1$]
Hasan-GEN shrimp-ACC Mehmet-GEN also oyster-ACC
duydum yediğini$_1$
heard ate
'Zeynep heard that Hasan (ate) the shrimp, and Mehmet ate the oyster.'

Under the ATB-movement analysis, it is not clear why a DO can ATB-move to the right periphery of the matrix clause from the complement clause, whereas a verb cannot:

26. a. [[$_{\text{matrix}}$ . . . [$^{\text{complement}}$ [$_{\&1}$ . . . _____$_1$ . . .] [$_{\&2}$ . . . _____$_1$ . . .]] V$^{\text{matrix}}$] *DO1*]
b. *[[$_{\text{matrix}}$ . . . [$^{\text{complement}}$ [$_{\&1}$ . . . _____$_1$] [$_{\&2}$ . . . _____$_1$]] V$^{\text{matrix}}$] *V1embedded*]

4.5 Interim conclusion

In conclusion, the RNR data from Turkish is problematic for both *ATB-movement* and *Multiple Dominance* analyses of RNR. Neither of these analyses can account for the specific properties of RNR in Turkish introduced above.

5. RNR as ellipsis

In this section, we will see the four problems for ATB and/or Multiple Dominance analyses introduced above are evidence for/not problematic for **RNR as Ellipsis**.

5.1 Agreement properties

The fact that a RNR-ed verb shows agreement only with the Subject of the second conjunct is predicted by RNR as Ellipsis. Since the rightmost identical element must be pronounced in RNR structures, only the agreement on the rightmost identical element can be pronounced:

27. Sen elma-yı ~~ye-di-n~~ , ben armud-u ye-di-**m**.
you apple-ACC ate-PST-2S I pear-ACC eat-PST-1S
'You (ate) the apple, and I ate the pear.'

In a case where more than two clauses are conjoined, it is again the rightmost verb that is pronounced –which shows agreement with the Subject of the rightmost conjunct:

28. Sen elma-yı ~~ye-di-n~~ , ben armud-u ~~ye-di-m~~, Tolga üzüm-ü
you apple-ACC eat-PST-2S I pear-ACC eat-PST-1S grape-ACC
ye-di-Ø/*n/*m.
eat-PST-3S/2S/1S
'You (ate) the apple, I (ate) the pear, and Tolga ate the grape.'

5.2 Head-adjunction

Since the verbal head in the second conjunct is pronounced in its canonical position, it does not need to adjoin to any phrase. Therefore, a head can be shared in a coordinate structure as long as it is the rightmost element in the conjunction.

5.3 Adjunction to complement clauses

The *PF Ellipsis* analysis needs to account for, on the one hand, grammaticality of RNR of verbal heads in complement clauses and, on the other hand, ungrammaticality of RNR of DOs in complement clauses (ex. 17&20 repeated as ex. 29&30, respectively):[3]

29. Zeynep [[[Hasan-ın karides-i , Mehmed-in de istiridye-yi
Zeynep Hasan-GEN shrimp-ACC Mehmet-GEN also oyster-ACC
yediğini] duydu
ate heard
'Zeynep heard that Hasan (ate) the shrimp, and Mehmet ate the oyster.'

30. **pro* [[[Mehmet-in ___$_1$ pişirdiğini], [Hasan-ın da ____$_1$ ye-diğini]] elma-yı$_1$]
-GEN cooked -GEN also ate apple-ACC
biliyorum.
know
'I know that Mehmet cooked and Hasan ate, the apple.'

To explain this dichotomy, I will propose the following generalization, the motivation of which I will leave an open issue at this stage:

31. *Right Edge Generalization* (REG)
In the configuration
[[$_A$….X…] Conj. [$_B$…X…]]
X must be rightmost element in the conjunct B or the whole structure –
including &P- before X can be deleted in A.

For PF-deletion to occur in RNR structures, REG first needs to be satisfied, which requires, when necessary, that the shared element in the second conjunct needs to move to either the right edge of the second conjunct or the whole sentence that also includes the &P. This explains the grammaticality of ex. (29). Since the verb in the second conjunct is already the rightmost element in its canonical position, REG is satisfied, without requiring any further movement. In this case the identical verb in the first conjunct is elided:

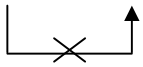
32. . . . [$_{\&P}$ [$_{C1}$ . . . ~~V$_1$~~] [$_{\&'}$ [$_{C2}$ . . . V$_1$]] V$_{matrix}$ *REG satisfied*

In (30), however, REG cannot be satisfied with the shared DO in its canonical position inside the second conjunct. First, the canonical position of the DO *elmayı* 'the apple' is not the rightmost position in the second conjunct; furthermore, it cannot move to the right edge of the second conjunct because rightward adjunction to complement clauses is not allowed in Turkish independently, as ex. (34) shows:

[3] Aslı Göksel (p.c.) notes that when the embedded verb is stressed and the shared DO is distressed in ex. (30), the structure is grammatical. I assume that the DO is phonologically incorporated to the embedded verb, and the structure is thus saved:

i. . . . **YEDİĞINI** *elmayı* . . .

33. . . . [$_{\&P}$ [$_{C1}$ . . . ~~DO$_1$~~ V^o] [$_{\&'}$ [$_{C2}$ . . . . ____$_1$ V^o DO$_1$]]] V$^o{}_{matrix}$



34. *Ahmet [Ali-nin t_1 öptüğünü Ayşe-yi$_1$] bil-iyor.
-GEN kissed -ACC knows
'Ahmet knows that Ali kissed Ayşe.'

So, PF-deletion and REG explains the dichotomy between RNR of verbs and DO's in complement clauses in Turkish. DO's cannot be shared in complement clauses because they cannot move to the right edge of the second conjunct.

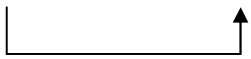
5.4 Long-distance RNR

PF-deletion analysis also accounts for 'long-distance RNR' data in Turkish. As stated before, a shared verb in a conjoined complement clauses cannot follow the matrix verb, whereas a DO can (25a-b repeated as 35a-b):

35. a. [[*pro* [[Mehmet-in ___$_1$ pişirdiğini], [Hasan-ın da ____$_1$ ye-diğini]]
-GEN cooked -GEN also ate
biliyorum] elma-yı$_1$].
know apple-ACC
'I know that Mehmet cooked and Hasan ate, the apple.'
b. **pro* [Hasan-ın karides-i ___$_1$, Mehmed-in de istiridye-yi ___$_1$]
Hasan-GEN shrimp-ACC Mehmet-GEN also oyster-ACC
duydum yediğini$_1$
heard ate
'Zeynep heard that Hasan (ate) the shrimp, and Mehmet ate the oyster.'

Ex. (35a) is grammatical because the REG can be satisfied by rightward-adjunction of the DO *elmayı* 'the apple' to the matrix clause –Turkish allows long-distance rightward scrambling of phrases out complement clauses (ex. 37):

36. [. . . [$_{\&P}$ [$_{C1}$ . . . DO$_1$ . . .] [$_{\&'}$ [$_{C2}$ . . . ____$_1$ . . .]]]V$_{matrix}$ DO$_1$



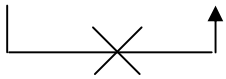
37. Hasan [Ahmet-in t_1 yediğini] biliyor elmayı$_1$.
ate knows apple
'The apple, Hasan knows that Ahmet ate (it).'

Ex. (35b) is bad because movement of *yediğini* 'ate' is spurious in that movement a shared element can be licensed only to satisfy REG in RNR structures (38). Since REG would already be satisfied with the shared verb in its canonical position, no movement of the verb is licensed:

38. *No Spurious Movement*
Movement of shared element can be licensed only to satify REG in RNR structures.

39. [. . . [$_{\&P}$ [$_{C1}$ . . . V_1] [$_{\&'}$ [$_{C2}$ . . . V_1]]] V_{matrix} V_1

REG
SATISFIED



Thus far, we have seen that 'RNR as ellipsis' can account for all the properties of RNR structures in Turkish unlike the other theories such as 'ATB-movement' and 'Multiple Dominance' analyses.

6. On the Right Edge

All studies on RNR agree on/propose a different 'right edge' condition. Two of these are by Wilder (1999, 2008) and Sabbagh (2007).

6.1 Wilder (1999, 2008)

Wilder (2008: 229) makes the following generalizations:

40. If a shared constituent α surfaces inside the *final* conjunct (as in Right Node Raising), then the gaps corresponding to α in all non-final conjuncts must be at the *right edge* of their respective conjuncts, whereby that position must be a possible surface position for α.

Wilder gives the following examples as arguments for his points (p. 244):

41. a. John has bought ___ and Mary will read *the paper*
b. * John can ___ your book and Mary will *read* the paper
c. John should fetch ___ and give *the book* to Mary
d. * John should give ___ the book and congratulate *that girl*[4]

As the ungrammaticality of ex. (41b-d) shows, the corresponding gap in the non-final conjunct needs to be the rightmost element in its conjunct. The shared element, on the other hand, does not need to be the rightmost element in its overt position as (41c) shows:

42. **the >> book** >> to >> Mary
SHARED MATERIAL

[4] Alexander Williams (p.c.) notes grammaticality of the following examples:
(1) Harry will send __ to London, and George will then pick up __, all the documents we need.
(2) I will photocopy __ this afternoon, and then at least skim __ by tomorrow morning, all the readings for our class.
He also notes that it's worth noting in this context the further fact that the first object of a ditransitive, unlike the first object of a *to*-dative, will not allow extraposition:
(3) *John should give the book his favorite uncle.
(4) Harry will send to London all the documents we need.

However, Turkish shows the opposite of Wilder's generalization. In Turkish, the shared element needs to be the rightmost element in the conjunction in its overt position, and the corresponding gap(s) in the non-final conjuncts need not to be the rightmost element in their conjunct:

43. a. Hasan ____$_1$ pişirdi , Mehmet yedi **balığı**$_1$.
cooked ate fish-ACC
'Hasan cooked and Mehmet ate the fish.'
b. *Hasan ____$_1$ pişirdi , Mehmet **balığı**$_1$ yedi.
cooked fish-ACC ate
'Hasan cooked and Mehmet ate the fish.

In the first conjunct in ex. (43a), the corresponding gap for the shared phrase *balığı* 'the fish' is followed by the verbal head *pişirdi* 'cooked', which means that the gap is not at the right edge of the conjunct. However, the structure is grammatical. In ex. (43b), on the other hand, the shared element is not the rightmost element in the second conjunct, preceded by the verb, and the structure is ungrammatical. Ex. (43a) is grammatical because the shared element is the rightmost element in the second conjunct.

We could change the requirement (31 (repeated as (44))) such that it requires no phrase follows the corresponding gap in the non-final conjunt(s). In that way, the grammaticality of (46a) could be explained. However, we need to check whether cases where a phrase follows the corresponding gap in the non-final conjunt(s) are grammatical:[5]

44. *Right Edge Generalization* (REG)
In the configuration
[[$_A$….X…] Conj. [$_B$…X…]]
X must be rightmost element in the conjunct B or the whole structure –
including &P- before X can be deleted in A.

45. Hasan ~~Tolga-ya$_1$~~ dergi-yi sattı, Meral (de) t_1 gazete-yi sattı Tolga-ya$_1$
-DAT magazine-ACC sold also magazine-ACC sold -DAT
'Hasan sold the magazine, and Meral sold the newspaper, to Tolga.'

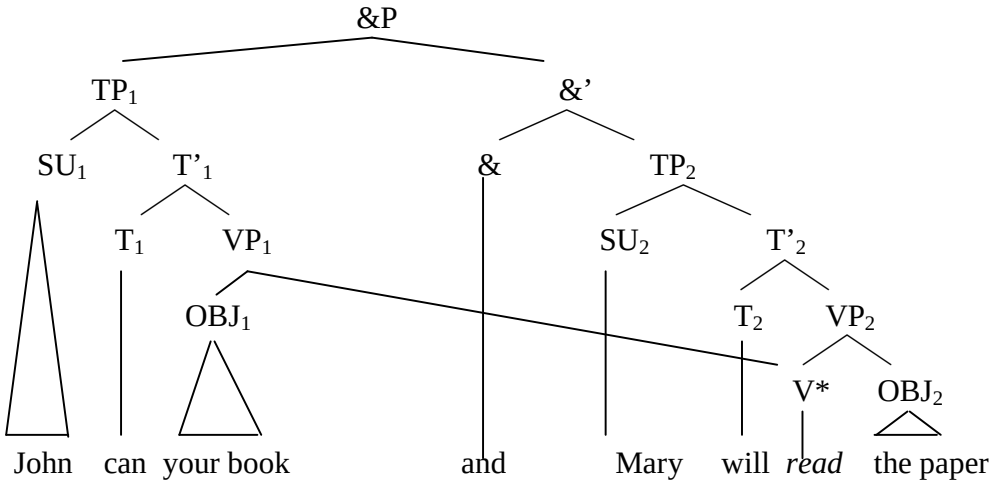
In ex. (45), the corresponding gap in the first conjunct is followed by another phrase, namely DO *dergiyi* 'the magazine', but the structure is still grammatical. This clearly shows that Wilder's generalization in (40) does not hold in Turkish.

Wilder (2008) notes that his generalization is a consequence of linearization in terms of LCA. If an element follows the shared element in the first conjunct, a symmetry violation will arise because since the shared element c-commands an element that follows it, it will precede it, but at the same time, since the first conjunct c-commands the shared element –the shared element being a member of the second conjunct as well-, all its terminals –including the element that follows the shared element- will precede the shared element:

[5] Following Öztürk (2005), I take the ordering of ditransitives as 'IO + DO + V'.

46. a. *John can ___ your book and Mary will *read* the paper.

b.



c. V* c-commands into OB_1: read < {your, book}

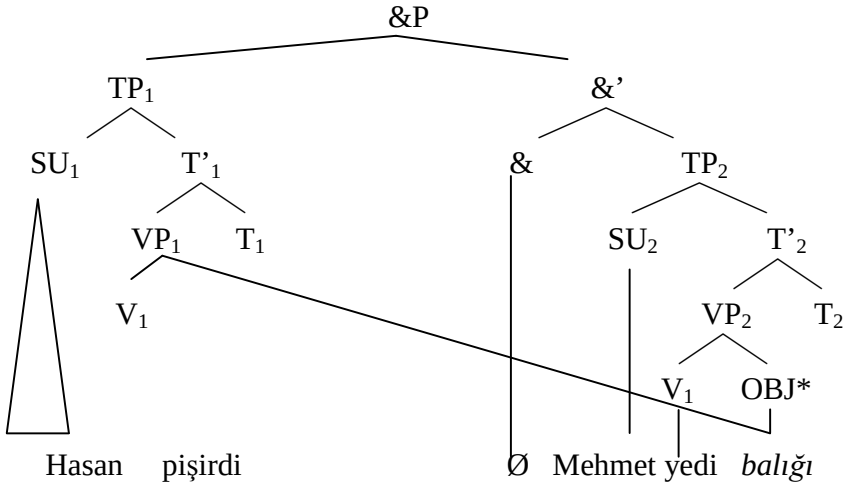
d. TP_1 c-commands V*: {John, should, your, book} < read

(Wilder 2008: 245)

However, in the grammatical example (43a) in Turkish, we have exactly the same configuration:

47. a. Hasan ____$_1$ pişirdi , Mehmet yedi **balığı**$_1$.
cooked ate fish
'Hasan cooked and Mehmet ate the fish.'

b.



Turkish being a head final language, the verb in the first conjunct follows the shared OBJ (see Kural (1997) against a Spec-Head-Complement analysis of Turkish under Kayne LCA). Under Wilder's analysis, we would get a violation since:

48. a. OBJ* c-commands into V_1: balığı < pişirdi

b. TP_1 c-commands OBJ*: {Hasan, pişirdi} < balığı

However, no violation arises, and the structure is linearized in Turkish, showing inadequacy of Wilder's analysis. Also, under LCA, a couple of (unmotivated) movement operations would be required to explain how the OBJ* occurs in postverbal position in the second conjunct. OBJ* would need to move to a position above TP_2, and then TP_2 would need to move to a position above OBJ^*.

6.2 Sabbagh (2007)

Sabbagh gives a stricter version of Wilder's generalization in (40):

49. *Right Edge Restriction* (RER)
    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.

For Sabbagh –who argues for ATB-movement analysis of RNR-, the shared element has to be the rightmost in both/all conjuncts before ATB extraction. The data from Turkish again shows that this restriction cannot be generalized to Turkish because X in the first conjunct does not need to be the rightmost element in its conjunct. The English data in (41c) also shows that a phrase can follow the shared element in the second conjunct although they are SOD-mate. Sabbagh also gives the following generalization (p. 359):

50. *Rightward Crossing Constraint* (RCC)
    Rightward movement of X may not cross phonologically overt material which is not contained within the cyclic node (= vP, PP) wherein X is initially merged.

Apparently, this generalization does not hold in Turkish because a DO merged in vP –a cyclic node- in a complement clause can move up to the matrix clause and follow the matrix verb –which has been merged in a separate cyclic node than that of the shared DP- (ex. (35a) repeated as ex. (51)):

51. [[*pro* [[Mehmet-in ___$_1$ pişirdiğini], [Hasan-ın da ____$_1$ ye-diğini]]
    -GEN cooked -GEN also ate
    biliyorum] elma-y$ı_1$].
    know apple-ACC
    'I know that Mehmet cooked and Hasan ate, the apple.'

52. a. . . . . [$_{vP}$ . . . [$_{\&P}$ [$_{vP}$ . . . DO . . .] [$_{vP}$ . . . DO . . .]] . . . V^{matrix}] . . .
    b. . . . [$_{vP}$ . . . [$_{\&P}$ [$_{vP}$ . . . ___$_1$ . . .] [$_{vP}$ . . . ___$_1$ . . .]] . . . V^{matrix}] DO_1 . . .

(52a) shows that the direct object DO in the complement structure and the matrix verb V^{matrix} are (first-)merged in separate cyclic nodes. However, as (40b) shows, the DO can follow the matrix verb, which would be a violation of RCC.

Also, Sabbagh's system is very confusing in that he assumes Fox & Pesetsky's 'cyclic linearization' model. He takes *v*P, CP and PP as Spell-Out Domains (SOD). As to *v*P and PP, he

assumes that the complete projection of *v*P and PP is linearized; however, he also assumes that TP complement of CP is linearized. This system is inconsistent in that it is not clear why the complete projection of *v*P and PP can be linearized, whereas the domain/complement of CP but not the whole CP is linearized.

7. Conclusion

In this study, we have found some evidence from Turkish for PF-deletion analysis of RNR structures. The evidence is agreement facts and differences between what can be shared in complement clauses and matrix clauses in RNR structures. The remaining question is why a shared element has to be the rightmost element in the second conjunct in RNR structures in Turkish. I have a speculation about ~~this question~~$_1$ but not a definite answer to ***this question***$_1$.

References

Abbott, Barbara. 1976. Right node raising as a test for constituenthood. *Linguistic Inquiry* 7: 639–642.

Abels, Klaus. 2005. Right node raising: Ellipsis or across the board movement. In K. Moulton, & M. Wolf (Eds.), *Proceedings of NELS 34*, pp. 45–59. Amherst: GLSA.

Bozşahin, Cem. 2000. Gapping and word order in Turkish. In A.S. Özsoy, *et.al.* (eds.), *Studies in Turkish Linguistics: Proceedings of the X. International Conference in Turkish Linguistics*, Boğaziçi University Press, Istanbul, pp. 95-104.

Bresnan, Joan. 1974. The position of certain clause particles in phrase structure. *Linguistic Inquiry*, *5*, 614–619.

Gazdar, G. 1981. Unbounded dependencies and coordinate structure. *Linguistic Inquiry*, *12*, 155–184.

Grosu, Alexander. 1976. A note on subject raising to object and right node raising. *Linguistic Inquiry, 7/4*, 642–645.

Hankamer, Jorge. 1971. Constraints on deletion in syntax, Ph.D. dissertation, Yale University, New Haven, CT.

Hartmann, K. 2000. *Right node raising and gapping: Interface conditions on prosodic deletion*. Amsterdam: John Benjamins.

Hartmann, K. 2003. Background matching in right node raising constructions. In K. Schwabe, & S. Winkler (Eds.), *The Interfaces: Deriving and interpreting (omitted) structures*, pp. 121–151. Amsterdam: John Benjamins.

Hudson, Richard. 1976. Conjunction reduction, gapping, and right node raising. *Language* 52:535-562.

Ince, Atakan. In press. Gapping in Turkish. In *Proceedings of the North Eastern Linguistic Society* 38, GLSA Publications.

Kayne, Richard S. 1994. *The antisymmetry of syntax*, Cambridge, MA: MIT Press.

Kornfilt, Jaklin. 2000. Directionality of identical verb deletion in Turkish; in *An Electronic Festschrift for Jorge Hankamer*; S. Chung and J. McCloskey (eds.); in http://ling.ucsc.edu/Jorge/kornfilt.html.

Levine, R. D. 1985. Right node (non-)raising. *Linguistic Inquiry*, *16*, 492–497.

Levine, R. D. 2001. The extraction riddle: Just what are we missing? *Journal of Linguistics*, *37*, 145–174.

McCawley, James D. 1982. Parentheticals and discontinuous constituent structure. *Linguistic Inquiry*, *13*,91–106.

McCloskey, James D. 1986. Right node raising and preposition stranding. *Linguistic Inquiry*, *17*, 183–186.
Munn, Alan. 1999. On the identity requirement of ATB movement. *Natural Language Semantics*, *7*, 421–425.
Phillips, Colin. 1996. Order and structure, Ph.D. dissertation, MIT, Cambridge, MA. Distributed by MITWPL.
Postal, Paul. M. 1974. *On raising*. Cambridge, MA: MIT Press.
Ross, John. 1967. *Constraints on variables in syntax.* Ph.D. dissertation, MIT, Cambridge, MA. Published as *Infinite Syntax!* Norwood, NJ: Ablex, (1986).
Sabbagh, Joseph. 2007. Ordering and linearizing rightward movement. *Natural Language and Linguistics Theory* 25: 349-401.
Sag, I. 1976. A note verb phrase deletion. *Linguistic Inquiry*, *7/4*, 664–671.
Wexler, Ken & Culicover, Peter W. 1980. *Formal principles of language acquisition*, Cambridge, MA: MIT Press.
Wilder, Chris. 1997. Some properties of ellipsis in coordination. In A. Alexiadou, & T. A. Hall (Eds.), *Studies on universal grammar and typological variation*, pp. 59–107. Amsterdam: John Benjamins.
Wilder, Chris. 1999.Right node raising and the LCA. In S.Bird et al. (Eds.), *Proceedings of the eighteenth west coast conferences on formal linguistics*, pp. 586–598. Somerville, MA: Cascadilla Press.
Wilder, Chris. 2008. Shared constituents and linearization. In K. Johnson (ed), *Topics in Ellipsis*, pp. 229-258. Cambridge: Cambridge University Press.