On Complex DPs in Turkish:

Lessons for Inverse Linking and Scope Rigidity

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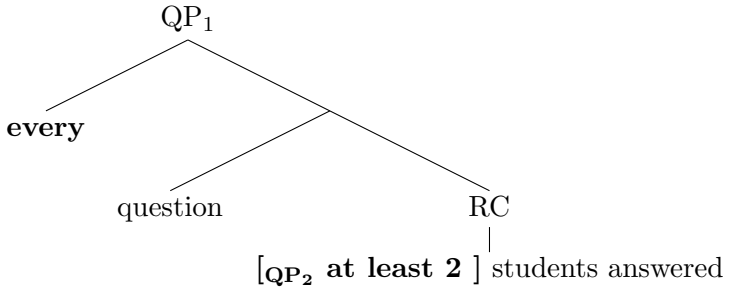
1 Overview

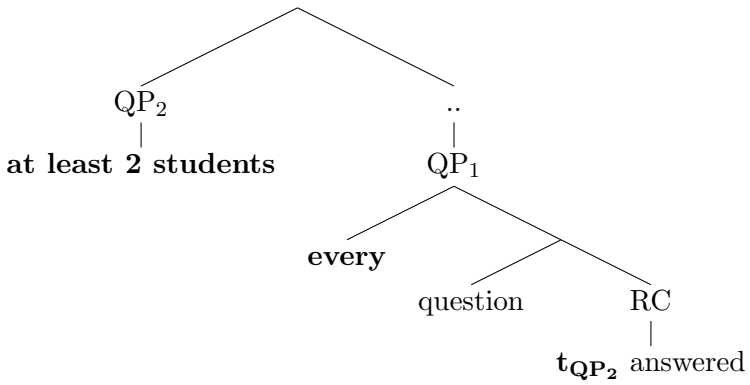
- In this study, I investigate the structure of quantified DPs in Turkish that contain a RC[1].
- My focus will be on structures like (1), where the restriction of a Quantifier contains a RC whose subject is a QP.

(1)



- I will show that in Turkish, the inner QP_2 can overtly raise as in (2).
- This movement will be shown to have LF consequences. For example, it is able to extend the scope of QP_2.

(2)

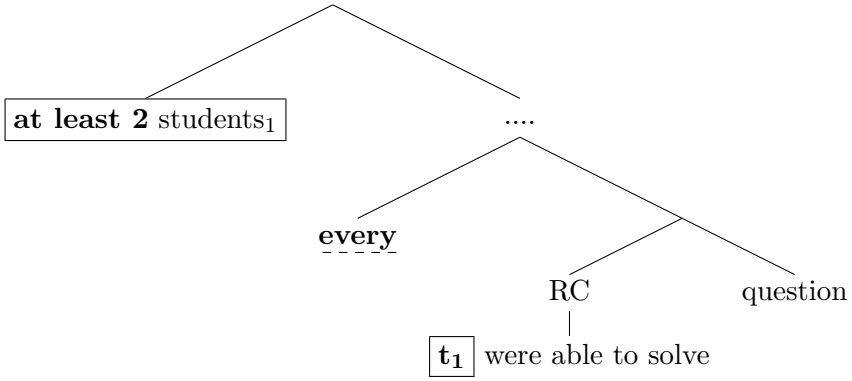


[1] I am grateful to Sabine Iatridou, Danny Fox, Martin Hackl, and the audience at the Topics in Semantics seminar at MIT for their helpful feedback. All errors are solely my own.

- This is illustrated below:
- Note that the subject of the RC **at least two students** in (3) appears outside the RC and to the left of the quantifier **every**.
- In this linear order, the only available reading is [at least 2>every].

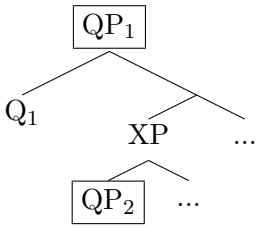
(3) En az iki öğrenci-nin **her** [$_{RC}$ *t* çöz-ebil-diğ-i] soru kolay-dı.
at least two student-GEN every solve-ABIL-REL-POS.3 question easy-PST
Lit: At least two students, every question that *t* were able to solve was easy.
'Every question [$_{RC}$ that **at least 2 students** were able to solve] was easy '
Interpretation: [at least 2>every], [*every>at least 2]

(4)



- Hence, essentially, the structures that we will consider in Turkish are in the shape of (5), where a QP is contained in another QP (*modulo* directionality).

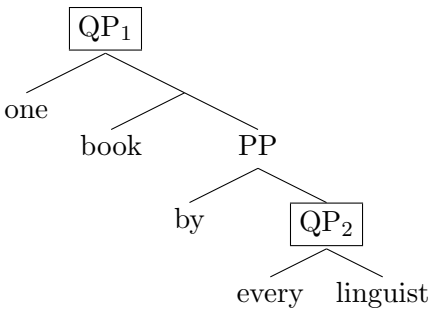
(5)



- These cases are very much like the cases called 'Inverse Linking' (May, 1977).
- An example in (6):

(6) Tom read [$_{QP_1}$ **one** book by [$_{QP_2}$ **every** linguist]] (Sauerland 2005: 1)

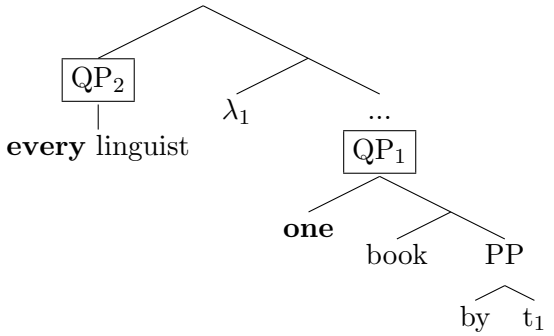
(7)



- It is generally assumed that QR takes place in (8) to bring about the natural reading of the sentence [May (1977, 1985), Heim & Kratzer (1998), Sauerland (2005), a.o.]

(8) Tom read [$_{QP_1}$ **one** book by [$_{QP_2}$ **every** linguist]] (Sauerland 2005: 1)

(9)



- I hypothesize that the overt QP-extraction out of DPs in Turkish (e.g. (3)) is an analogue of the QR responsible for Inverse Linking in English (e.g. (9)).

Landing site of QR: inside or outside the DP?

- There has been a disagreement in the literature regarding the landing site of the proposed instance of QR (e.g. (9)) in Inverse Linking cases:
  - May's (1977) original analysis involved quantifier-raising the inner QP outside the containing QP.
  - Later work proposed that DP is a scope island and the QR in this case involves adjunction to DP. (May 1985, Rooth 1985, Larson 1985, Heim and Kratzer 1998, a.o.)
  - Sauerland (2005), however, presented some arguments in favor of the original analysis that took QR out of DP to be possible. He concluded that DP is not a scope island. (See Charlow (2010) for a criticism of Sauerland's (2005) arguments.)

- I will argue that the relevant Turkish data support Sauerland's (2005) (and May's (1977)) position that QR out of DP is possible and DP is not a scope island (in Turkish).

- Overall, I hope that the current investigation will help us understand
  - the structure of Complex DPs in Turkish
  - whether or not DP is a scope island in Turkish &
  - and some issues regarding the definition of what is called 'Scope Rigidity'

- **Roadmap**
  - Background: 'Overt QR' in Turkish
  - Complex DPs and QR
  - Implications for Scope-Islandhood of DPs and Scope Rigidity

2 Background: 'Overt QR' in Turkish

- Clause-internal overt displacement (aka *'scrambling'*) in Turkish is able to
  - rearrange scope (10),
  - create a binder for variable binding (11),
  - fix intervention effects (12)
- Hence, it can have LF-consequences[2]. [Kural (1992), Kelepir (2001), Öztürk (2005), a.o]

(10) a. En az iki öğrenci her soru-yu doğru cevapla-dı.
at least two student every question-ACC correct answer-PST
'At least two students answered every question correctly.' (*$\forall > \exists$)

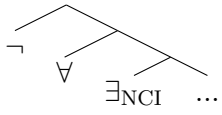
b. [**her soru-yu**] en az iki öğrenci ***t*** doğru cevapla-dı.
every question-ACC at least two student correct answer-PST
Lit: Every question, at least two students answered correctly.
'Every question was such that at least two students answered it correctly.' ($\forall > \exists$)

(11) a. Anne-si her çocuğ-u besle-di.
mother-POS.3 every boy-ACC feed-PST
'His$_{*1}$ mother fed every boy$_1$.'

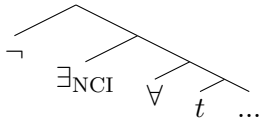
b. [**her çocuğ-u**] anne-si ***t*** besle-di.
every boy-ACC mother-POS.3 feed-PST
'His$_1$ mother fed every boy$_1$.'

(12) a. *Herkes hiçkimse-yle konuş-ma-dı
everybody anybody-with talk-NEG-PST
b. **Hiçkimse-yle** herkes ***t*** konuş-ma-dı
anybody-with everybody talk-NEG-PST
Lit: Nobody, everybody talked with.
'There is nobody that everybody talked with.'

(13) a. base order: intervention



b. derived order: intervention fixed!



- In the cases above, the object QP **needs** to linearly precede the subject for the purposes of
  - **scope reversal**,
  - **variable binding**,
  - **obviation of intervention**

[2] The data here show that reconstruction is not obligatory (or that what we see is not PF-scrambling). I leave aside the question whether or not reconstruction is possible.

- **A note on 'scrambling'**
  - What I have shown you is that in Turkish there is an overt movement that has LF effects.
  - Should we call this '**overt QR**', as I did in the section title?
  - Or should we call it 'scrambling that has LF effects' (i.e. scrambling that is not followed by obligatory reconstruction)? (see Mahajan 1990, 1994; Saito 1992; Keine, 2016, a.o.)
  - Is there a genuine distinction between the two?
  - In terms of their common effects, it seems obvious that Scrambling is somehow/can be related to **Quantifier Raising**. (But how exactly?)
    - Johnson (2000), for example, argues that QR patterns with scrambling (as opposed to, e.g. A' movement like topicalization).
    - Richards (2017, lecture notes) argues that languages like Japanese do not have any reason not to have QR overtly[3], clearly taking scrambling with QR effects to be 'overt instantiations of QR'.
    - Mayr and Spector (2012), on the other hand, make a clear distinction between scope-shifting covert movement vs scope-shifting overt movement w.r.t. Economy considerations (Fox 1995, 2000)[4]
  - There is clearly a lot more to say on the relationship between QR and scrambling.
  - I will henceforth simply use the term **QR** to refer to all instances of scrambling that is able to
    - **change relative scope of scope-bearing elements**,
    - **create a binder for variable binding**,
    - **fix intervention**
  - I will take the *necessity* of overt displacement for these LF-effects to occur in Turkish to signal that **QR is necessarily overt in Turkish**. (cf. Scope Rigidity)

[3] While Selectional Contiguity between adjacent heads in a head-initial language would be violated by an overt instance of QR, this is not the case in head-final languages

[4] For them, Quantifier Raising, only when it is defined as a *Covert Scope Shifting Operation*, is subject to the Generalized Scope Economy Condition:
"A CSSO is licensed in a sentence S only if there exists a constituent C of S (possibly S itself) such that the CSSO does not make the semantic value of C stronger than or equivalent to what it would be without the CSSO.".

(i) a. John didn't meet every student of mine on time.
($*\forall > \neg$)
b. The student couldn't answer every question that was marked with a star. ($\forall > \neg$) (ex:55-56)

2.1 Locality of QR in Turkish

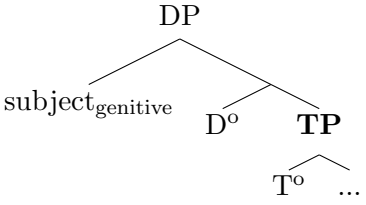
- Quantifier Raising also exhibits locality effects in Turkish.
- But this effect cannot make reference to finiteness.
- In Turkish, the overwhelming majority of embedded clauses are non-finite & nominalized.
- But we do find an interesting contrast with respect to the clause type:
- Observe the contrast between (14) and (15).

(14) Her öğrenci-yi, en az bir öğretmen [müdür-ün t öv-**me**-sin-i]
every student-ACC at least one teacher headmaster-GEN praise-MA-3.POS-ACC
istiyor
wants
Lit: Every student, at least one teacher wants the headmaster to praise t.
'Every student is such that at least one teacher wants the headmaster to praise them.'
($\forall >$ at least 1)

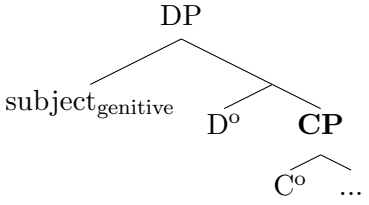
(15) Her öğrenci-yi, en az bir öğretmen [müdür-ün t öv-**düğ**-ün-ü]
every student-ACC at least one teacher headmaster-GEN praise-DIK-3.POS-ACC
düşünüyor
thinks
Lit: Every student, at least one teacher thinks that the headmaster praised t.
'At least one teacher thinks that the headmaster praised every student.'
(*$\forall >$ at least 1)

- The possibility for the embedded object QP to extend its scope above the matrix subject correlates with the type of nominalization used: -MA vs. -DIK.
- Kornfilt (2003, and previous work) independently argues that -MA nominalizations are TP-level nominalizations whereas -DIK nominalizations contain a CP[5] layer.

(16) -MA Nominalization



(17) -DIK Nominalization



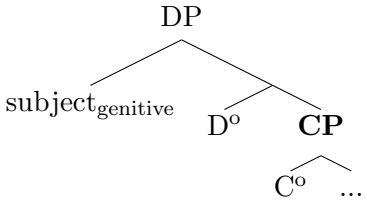
- This suggests that the domain of QR in Turkish is CP.

[5] For example, as shown by Kornfilt, only -DIK nominalizations support A' phenomena like embedded questions, relativization.

2.1.1 What is local enough?

- There is an interesting caveat to the locality of QR in Turkish.
- Notice that the genitive subject in the structure in (18) sits in the edge of the nominalized clause.

(18) -DIK Nominalization

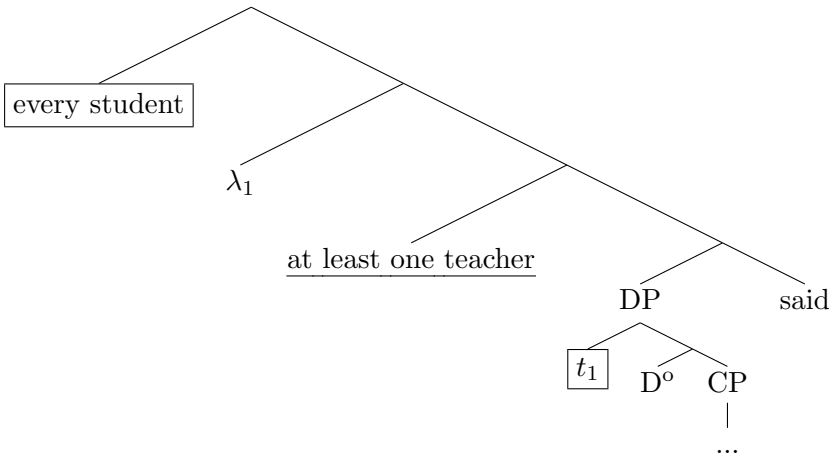


- We find that **this edge argument**, i.e. the genitive subject, is **able to extend its scope** beyond the clause it originates in.
- We observe that the extraction of the genitive subject is able to rearrange scope (19) or create a binder (21).[6]

(19) a. En az bir öğretmen [**her öğrenci-nin** sınıfta kal-dığ-ın-ı] söyle-di
at least one teacher every student-GEN class fail-NOML-3.POS-ACC say-PST
'At least one teacher said that every student failed.' (*∀ > ∃)

b. **Her öğrenci-nin** en az bir öğretmen [***t*** sınıfta kal-dığ-ın-ı] söyle-di
every student-GEN at least one teacher class fail-NOML-3.POS-ACC say-PST
Lit: Every student, at least one teacher said *t* failed.
'Every student$_i$ is s.t. at least one teacher said they$_i$ failed.' (∀ > ∃)

(20)

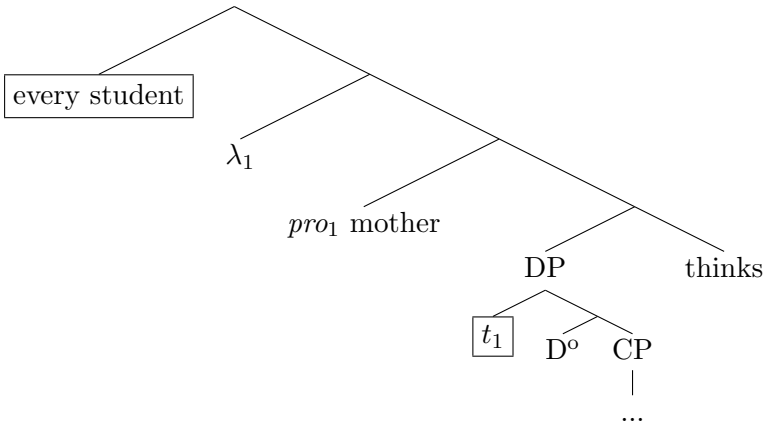


[6] Intervention test is non-applicable in this case.

(21) a. Anne-si [**her öğrenci-nin** sınıfta kal-dığ-ın-ı] san-ıyor
mother-3.POS every student-GEN class fail-NOML-3.POS-ACC think-IMPF
'His$_{*i}$ mother thinks that every student$_i$ failed.'

b. **Her öğrenci-nin** anne-si [***t*** sınıfta kal-dığ-ın-ı] san-ıyor
every student-GEN mother-3.POS class fail-NOML-3.POS-ACC think-IMPF
'His$_i$ mother thinks that every student$_i$ failed.'

(22)



- Extracting lower arguments out of an embedded (-DIK) clause, however, fails to rearrange scope or create a binder[7].

(23) a. En az bir öğretmen John-un her öğrenci-yi sınıfta bırak-tığ-ın-ı
at least one teacher John-GEN every student-ACC class fail-NOML-3.POS-ACC
söyle-di
say-PST
'At least one teacher said that John failed every student failed.' (*∀ > ∃)

b. **Her öğrenci-yi** en az bir öğretmen John-un ***t*** sınıfta bırak-tığ-ın-ı
every student-ACC at least one teacher John-GEN class fail-NOML-3.POS-ACC
söyle-di
say-PST
Lit: 'every student, at least one teacher said that John failed *t*.'
'Every student$_1$ is such that at least one teacher said John failed him$_1$.' (∀ > ∃)

(24) a. Anne-si John-un her öğrenci-yi sınıfta bırak-tığ-ın-ı san-ıyor
mother-3.POS John-GEN every student-ACC class fail-NOML-3.POS-ACC think-IMPF
'His$_{*i}$ mother thinks that John failed every student$_i$.'

b. **Her öğrenci-yi** anne-si John-un ***t*** sınıfta bırak-tığ-ın-ı
every student-ACC mother-3.POS John-GEN class fail-NOML-3.POS-ACC
san-ıyor
think-IMPF
'His$_{*i}$ mother thinks that John failed every student$_i$.'

[7] This type of movement is capable of inducing LF-effects that concern the clause it originates from, which argues for its successive cyclic nature.

- To summarize:
  - The overt displacement of QPs in Turkish can have consequences regarding
    - scope
    - variable binding
    - obviation of intervention
  - Under the assumption that these are instances of QR, we can make the claim that QR needs to be overt in Turkish.
  - As is well-known for (covert) Quantifier Raising, the effect of QP-movement in Turkish is also locally bound and cannot go beyond the CP it originates in.
  - As for the interesting caveat regarding genitive subjects, I assume that the subject in the edge position of a nominalized clause is (also) part of the higher clause w.r.t. the domain of QR.

3 Complex DPs and QR

- Remember that in inverse linking cases, there is a question regarding the landing site of the QR, which bears on the question whether or not DP is a scope island.

(25) Tom read [$_{QP_1}$ **one** book by [$_{QP_2}$ **every** linguist]] (Sauerland 2005: 1)

- The same question arises in cases that we will investigate in Turkish.
- The cases that I will consider in Turkish are DPs that contain a full RC. These are admittedly more complex, but I believe they present a good testing ground because:
  - RCs are nominalized -DIK clauses and have an edge argument (i.e. a genitive subject) that should in principle be able to QR
  - QR is overt in Turkish
- RCs are prenominal -DIK nominalizations with a gap in the relativization site[8].

(26) a. [$_{RC}$ Mary-**nin** *e* yaz-dığ-**ı**] makale-yi oku-du-m
Mary-GEN write-NOML-3.POS article-ACC read-PST-1
'I read the article that Mary wrote.'

b. [Mary-**nin** makale yaz-dığ-**ı**] doğru
Mary-GEN article write-NOML-3.POS true
'That Mary wrote/writes articles is true.'

[8] I ignore subject relativization cases which exhibit a different morphosyntax altogether. See Kornfilt (2003) and the references therein.

- Relative scope within the Complex DP can be altered via word order permutations:

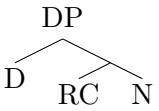
(27) a. **En az iki öğrenci-nin** çöz-ebil-diğ-i **her** soru kolay-dı.
at least two student-GEN solve-ABIL-REL-POS.3 every question easy-PST
'Every question that at least two students were able to solve was easy.'
(*at least 2 > ∀)

b. **En az iki öğrenci-nin her** çöz-ebil-diğ-i soru kolay-dı.
at least two student-GEN every solve-ABIL-REL-POS.3 question easy-PST
Lit: At least two students, every question that *t* were able solve was easy.
'At least two students were such that every question they were able to solve was easy.'
(at least 2 > ∀)

- What is puzzling is that the relative linear order of [at least 2] and [every] is constant across (27a) and (27b).
- In (27a), the order is [RC D N] but we presumably interpret (27a) as [D [RC N]], where the RC restricts the D.
- In (27b) however, it looks as though D is inside the RC!
- In the following section, I show that the seemingly crazy word order is not crazy at all.

3.1 Structure of Complex DPs

- I argue that complex DPs that contain a RC always start out as in (28).

(28)


- For simplicity, I assume that the internal composition of the RC involves **null-OP movement** responsible for the predicate abstraction (Chomsky, 1977; Heim & Kratzer, 1998). [This is also the derivation that Özsoy (1996), Meral (2010), and Baturay Meral & Meral (2016) adopt[9]].
- I assume that there is a constraint that regulates how much material can intervene between D and N[10]. In particular, D cannot easily precede a genitive constituent:

(29) a. ?*Her Mary'nin makale-si
every Mary-GEN article-POS.3
Intended: 'Every article of Mary's'

b. Mary'nin her *t* makale-si
Mary-GEN every article-POS.3
'Every article of Mary's'

[9] See Kornfilt (2000, 2005), Gökgöz (2004), and Özçelik (2016) for Kayne's (1994) head-raising analysis of Turkish RCs. As far as I can see, the findings I report in this study would extend to a head-raising analysis of Turkish RCs.

[10] Özçelik (2016) argues that the RC-preposing is 'focus-movement at PF' that serves as the 'remnant IP-movement' in a head-raising analysis of RCs.

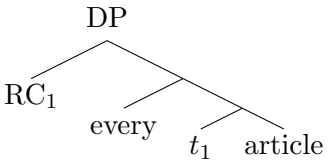
- Similarly, a full RC with an **overt** genitive subject is barely tolerated in its original position[11].

(30) ?***Her** [$_{RC}$ Deniz'in yaz-dığ-ı] makale-yi okudum.
every Deniz-GEN write-REL-POS.3 article-acc read-PST-1
'I read every article that Deniz wrote.'

(31) **Her** [$_{RC}$ pro_{2sg} yaz-dığ-ın] makale-yi okudum.
every write-REL-POS.2 article-acc read-PST-1
'I read every article that you wrote.'

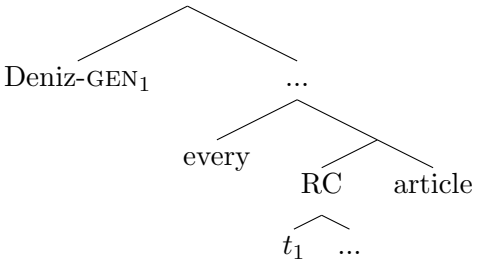
- Preposing the RC is able to fix the problem:

(32) [$_{RC}$ Deniz'in yaz-dığ-ı] **her** $\boldsymbol{t}_{RC}$ makale-yi okudum.
Deniz-GEN write-REL-POS.3 every article-acc read-PST-1
'I read every article that Deniz wrote.'

(33)


- A second option is to leave the RC in its original position but extract out of it:

(34) Deniz-in **her** [$_{RC}$ ***t*** yaz-dığ-ı] makale-yi okudum.
Deniz-GEN every write-REL-POS.3 article-acc read-PST-1
'I read every article that Deniz wrote.'

(35)


- There is evidence that
  - The RC can be interpreted below the DET when it is preposed BUT
  - The material extracted out of the RC **cannot** reconstruct below the DET!

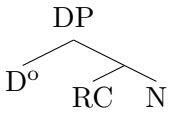
[11] Kornfilt (1997) claims that "Heaviness or length of a constituent does not play any role in Turkish in triggering movement processes" (p.206). I believe RC-preposing might constitute an exception to this claim.

3.2 Motivating the structure of Complex DPs

- In this section, I will try to motivate the following PF-LF pairings.

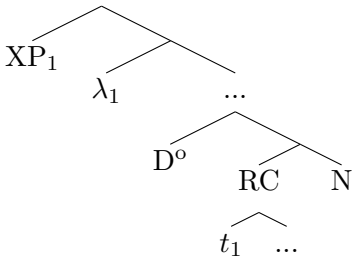
(36) a. **PF:** RC > D > N

b. **LF:**



(37) a. **PF:** XP_1 D > [$_{RC}$ t_1 ...]> N

b. **LF:**



3.2.1 Local NCI Licensing

- 'Kimse', a NCI, is no longer licensed when extacted out of the RC that contains its licensor.
- This suggests that reconstruction is impossible.

(38) a. [$_{RC}$ Kimse-nin gör-me-diğ-i] her ***t*** resm-i gör-dü-m
anybody-GEN see-NEG-REL-3.POS every picture-ACC see-PST-1
'I saw every picture that nobody saw.'

b. *Kimse-nin her [$_{RC}$ ***t*** gör-me-diğ-i] resm-i gör-dü-m
anybody-GEN every see-NEG-REL-3.POS picture-ACC see-PST-1
Intended: 'I saw every picture that nobody saw.'

c. John-un her [$_{RC}$ ***t*** gör-me-diğ-i] resm-i gör-dü-m
John-GEN every see-NEG-REL-3.POS picture-ACC see-PST-1
'I saw every picture that John didn't see.'

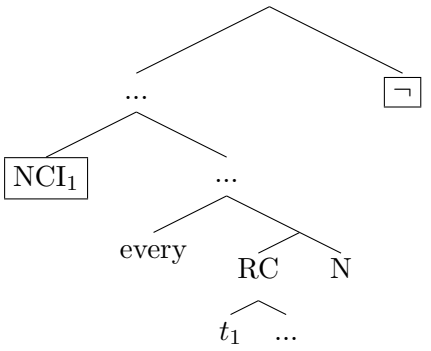
3.2.2 'Long-distance' NCI Licensing

- A NCI extracted out of a RC can be licensed by high negation.

(39) a. *[$_{RC}$ Kimse-nin oku-duğ-u] her ***t*** kitap uzun değil
anybody-GEN read-REL-3.POS every book long NEG
Intended: 'There is no person x such that every book that x read is long.' [12]

b. **Kimse-nin** her [$_{RC}$ ***t*** oku-duğ-u] kitap uzun **değil**
anybody-GEN every read-REL-3.POS book long NEG
Lit: Nobody, every book that t read is not long.
'There is no person x such that every book that x read is long.'

(40)

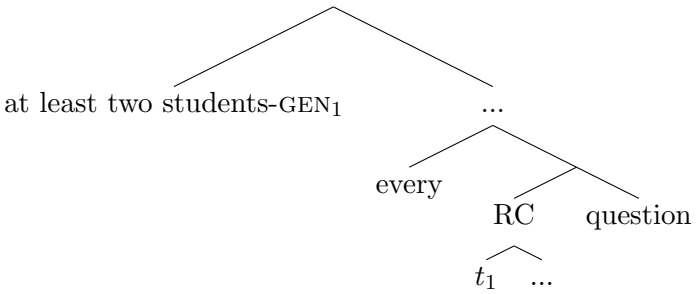


3.2.3 Quantifier Scope

(41) a. [$_{RC}$ En az iki öğrenci-nin çöz-ebil-diğ-i] **her** ***t*** soru kolay-dı.
at least two student-GEN solve-ABIL-REL-POS.3 every question easy-PST
'Every question that at least two students were able to solve was easy.'
(*at least 2 > ∀)

b. En az iki öğrenci-nin **her** [$_{RC}$ ***t*** çöz-ebil-diğ-i] soru kolay-dı.
at least two student-GEN every solve-ABIL-REL-POS.3 question easy-PST
Lit: At least two students, every question that t were able solve was easy.
'At least two students were such that every question they were able to solve was easy.'
(at least 2 > ∀)

(42)



[12] Unacceptable iff the RC is one prosodic unit

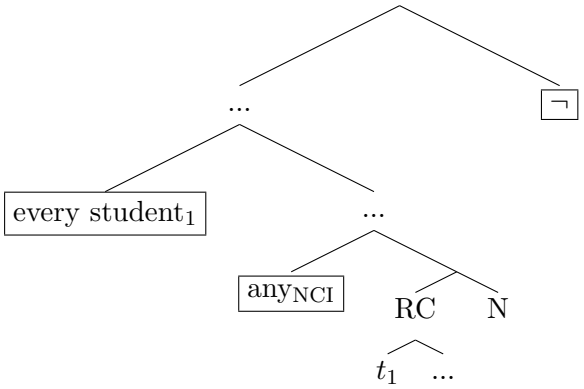
3.2.4 Intervention Effects

- We can induce the intervention configuration (* $\neg \forall \exists_{\text{NCI}}$) by overt extraction of the genitive subject of the RC.
- This again suggests that there is no reconstruction possibility in (43b):

(43) a. [$_{\text{RC}}$ Her öğrenci-nin cevapla-yabil-diğ-i] hiçbir ***t*** soru zor değil-di
every student-GEN answer-ABIL-REL-3.POS any question difficult NEG-PST
'No question that every student was able to answer was difficult.'

b. *Her öğrenci-nin hiçbir [$_{\text{RC}}$ ***t*** cevapla-yabil-diğ-i] soru zor değil-di
every student-GEN any answer-ABIL-REL-3.POS question difficult NEG-PST
Intended: 'No question that every student was able to answer was difficult.'

(44)



- Baseline cases are in (12).

3.2.5 A Note: Locality of QR out of Complex DPs

- QR out of Complex DPs respects the before-mentioned locality condition on QR.
- In particular, only the extraction of the edge argument of a RC can function as QR.

(45) a. [$_{\text{RC}}$ en az bir öğrenci-ye göster-diğ-in] her ***t*** resm-i beğen-di-m
at least one student-DAT show-REL-2.POS every picture-ACC like-PST-1
'(I) liked every picture that (you) showed to at least 1 student.' (*at least $n > \forall$)

b. *En az bir öğrenci-ye her [$_{\text{RC}}$ ***t*** göster-diğ-in] resm-i beğen-di-m
at least one student-DAT every show-REL-2.POS picture-ACC like-PST-1
Lit: To at least one student, (I) liked every picture that (you) showed t.
Intended: 'At least one student is such that I liked liked every picture that you showed to that student.' (*at least $n > \forall$)

- The extraction in (45b) is bad due to the fact that the object QP fails to extend its scope beyond the CP embedded in the RC.

- Long-distance NCI licensing is also impossible for a non-edge argument: (cf. (47))

(46) *__Hiçkimse-ye__ her [$_{RC}$ ***t*** göster-diğ-im] kitap uzun **değil**
anybody-DAT every show-REL-1.POS book long NEG
'There is no x such that every book that I sent to x is long.'

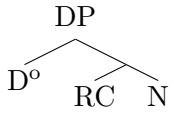
(47) **Hiçkimse-nin** her [$_{RC}$ ***t*** oku-duğ-u] kitap uzun **değil**
anybody-GEN every read-REL-3.POS book long NEG
'There is no x such that the book that x read is long.'

3.3 Interim Summary

- I have argued that the RC D N order in Turkish is derived by preposing the RC. In this linear order, the RC is still interpreted below the D.

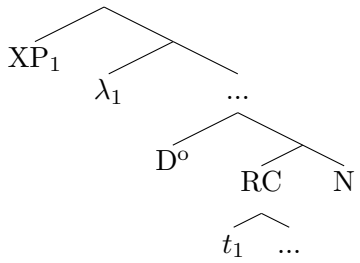
(48) a. **PF:** RC > D > N

b. **LF:**



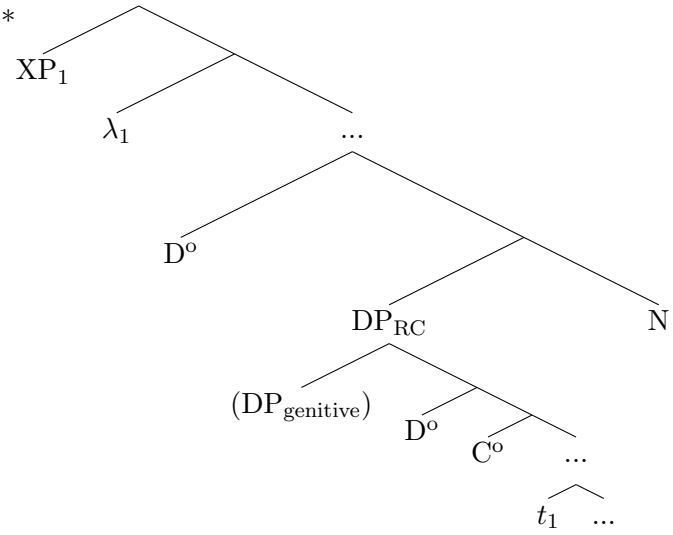
- For cases of extraction out of RCs, I have shown that
  - their genitive subjects are local enough to QR and adjoin to a position higher than the D

(49)



  - lower arguments in the RC cannot QR.

(50) *



4 Further Questions

4.1 What is the landing site of QR out of Complex DPs?

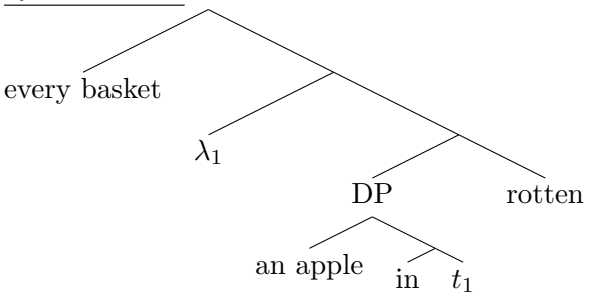
- We have seen evidence that certain overt word order permutations inside a complex DP can have LF consequences.
- In particular, I have argued that the derived scope in (51) involves QR, on a par with how the inverse scope in the inverse linking case in (52) is attained.

(51) En az iki öğrenci-nin **her** [$_{RC}$ ***t*** çöz-ebil-diğ-i] soru kolay-dı.
at least two student-GEN every solve-ABIL-REL-POS.3 question easy-PST
Lit: At least two students, every question that t were able solve was easy.
'At least two students were such that every question they were able to solve was easy.'
(at least 2 > ∀)

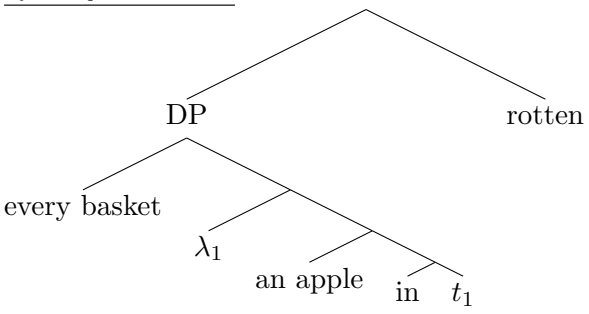
(52) **An apple in every basket** is rotten. (Heim&Kratzer, 1998:230)
'for every basket x, there is at least one apple y in x such that y is rotten.'

- We can ask the same question regarding the landing site of the QR in these cases.
- **Does QR necessarily adjoin to DP or can QR target a node outside DP?**

(53) QR out of DP

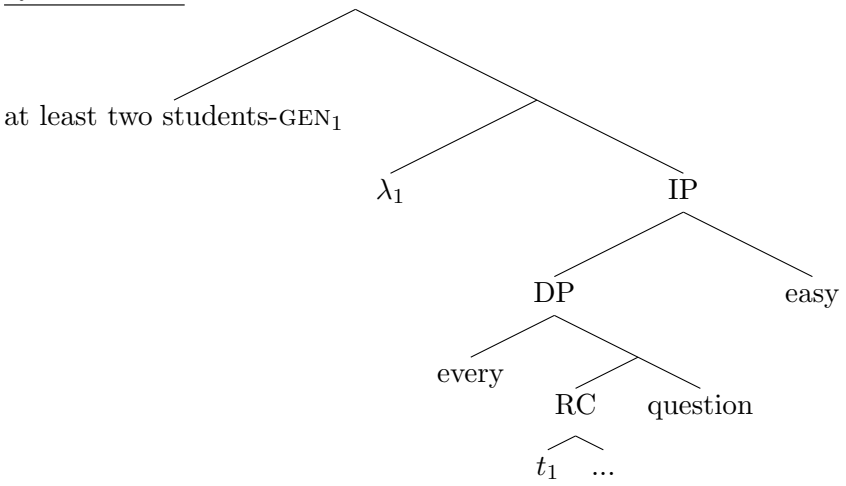


(54) QR adjoins to DP

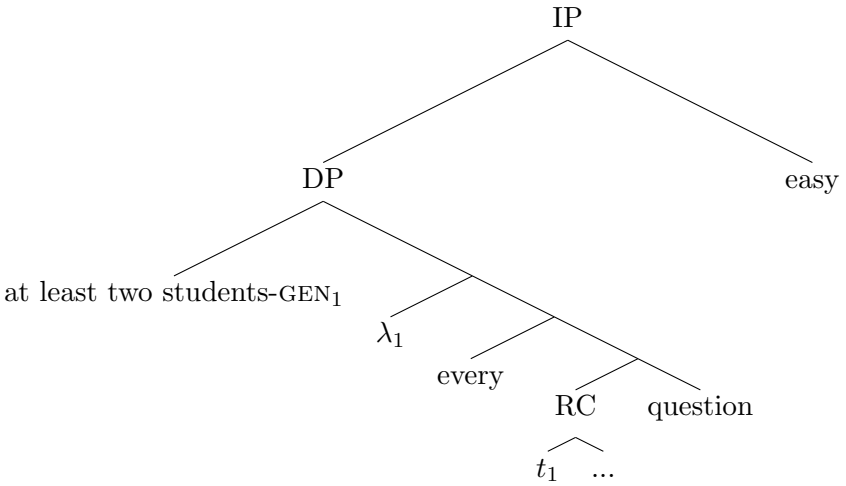


- (Note that the LF in (54) additionally requires type-shifting (Heim & Krazter, 1998).)

(55) QR out of DP



(56) QR adjoins to DP

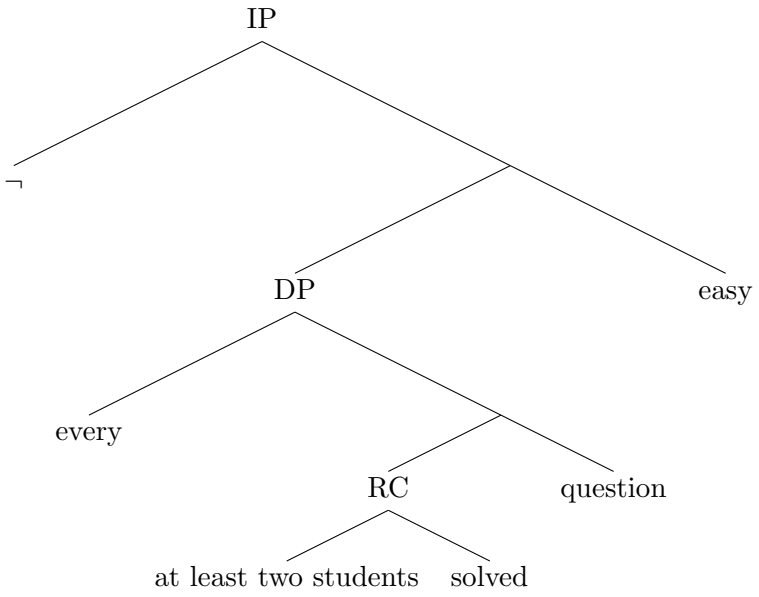


- There is some data that suggests that the option in (55) is available.
- Hence, QR can target a node outside the DP in Turkish.
- I will present two test cases:

- **Test Case#1: Scope wrt Sentential Negation**

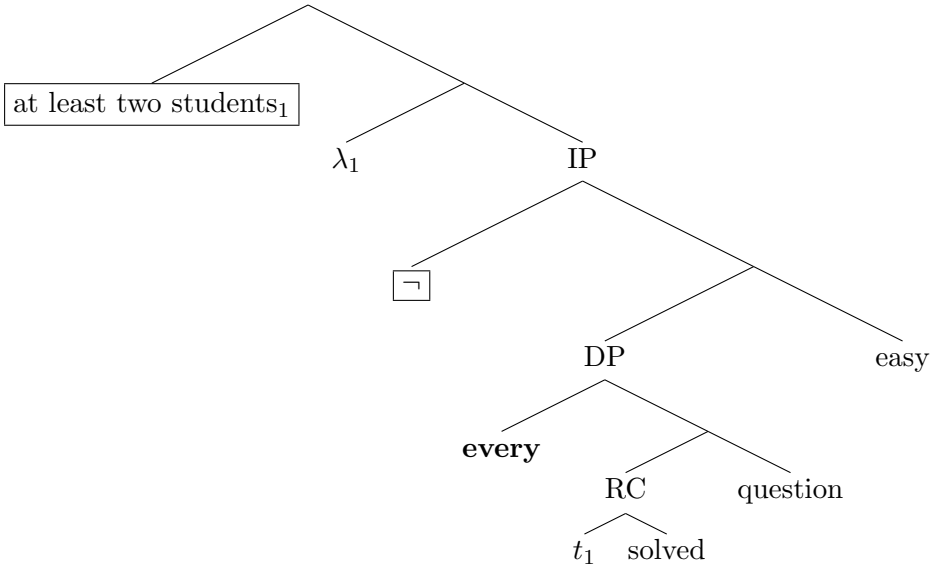
(57) [$_{RC}$ En az iki öğrenci-nin çöz-ebil-diğ-i] her ***t*** soru kolay değil-di.
at least two student-GEN solve-ABIL-REL-POS.3 every question easy NEG-PST
Lit: Every question that at least two students were able to solve was not easy.
'Not every question that at least two students were able to solve was easy.'
($\neg > \forall >$ at least n)

(58)



(59) En az iki öğrenci-nin her [$_{RC}$ ***t*** çöz-ebil-diğ-i] soru kolay değil-di.
at least two student-GEN every solve-ABIL-REL-POS.3 question easy NEG-PST
Lit: At least two students, every question that t solved was not easy.
'At least two students are such that not every question they were able to solve was easy.'
(at least n $> \neg > \forall$)

(60)

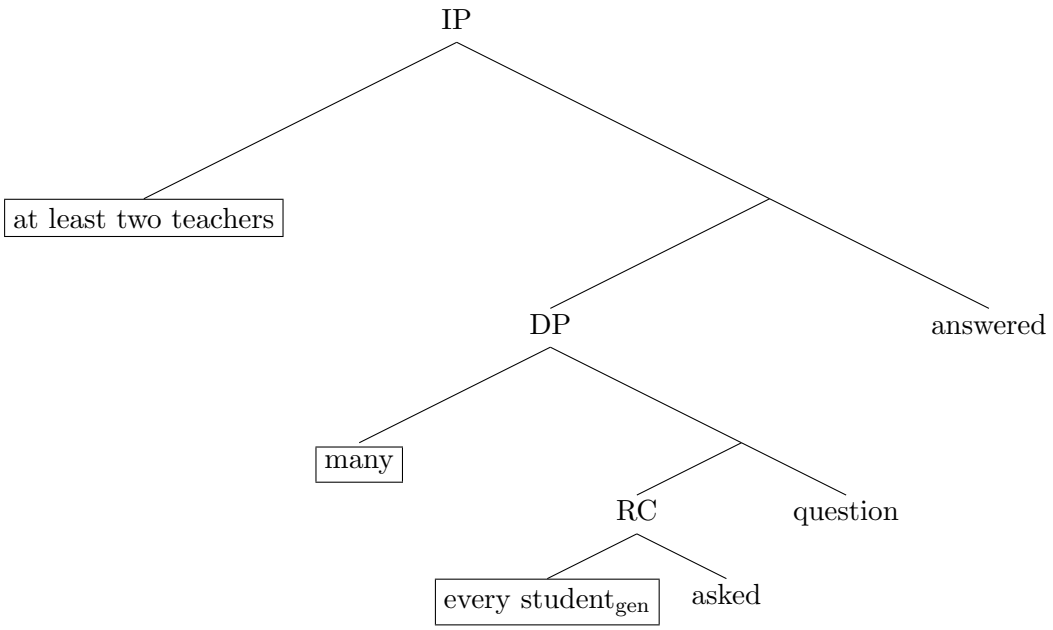


- If adjunction to DP were the only option, we would not be able to generate the split scope where negation intervenes between the two QPs.

- **Test Case#2: Scope wrt Matrix QP**

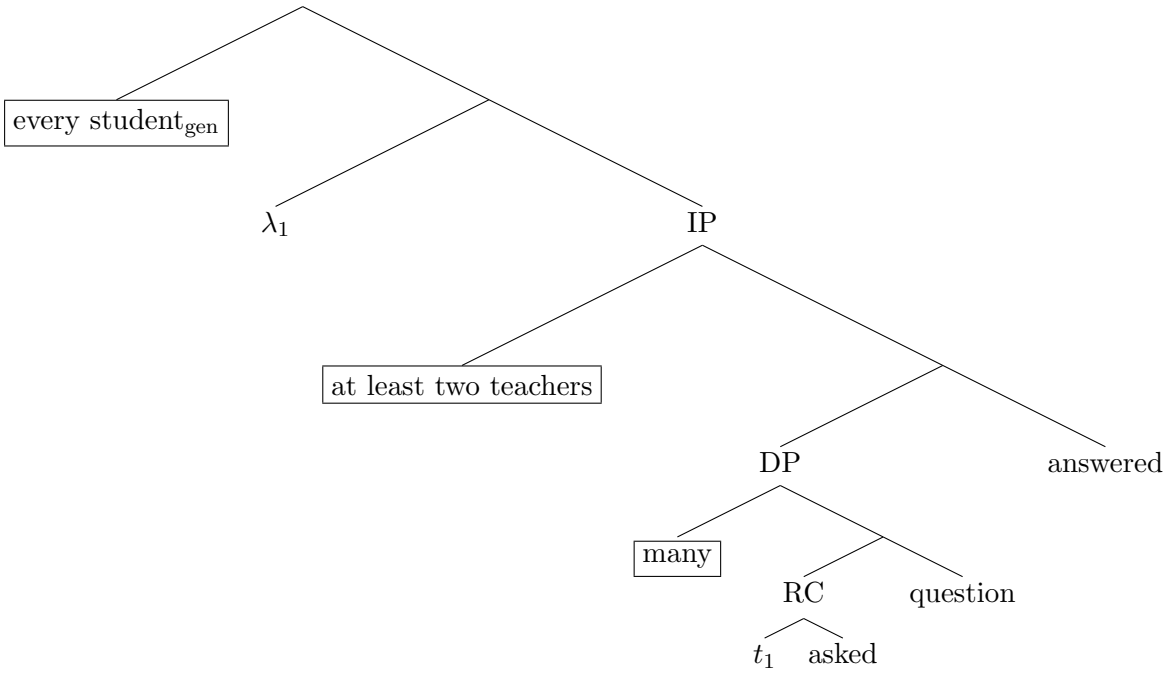
(61) En az iki öğretmen [$_{RC}$ her öğrenci-nin sor-duğ-u] birçok ***t*** soru-yu
At least two teacher every student-GEN ask-REL-3.POS many question-ACC
cevapla-dı.
answer-PST
'At least two teachers answered many of the questions that every student asked.'
(at least n > many > ∀)

(62)



- Can we get the reading where the subject of RC (every student) takes scope above the matrix subject while the object QP still takes scope below the matrix subject?

(63)



- Only 2 out of the 5 speakers I have consulted find (64) acceptable under the intended reading.

(64) %Her öğrenci-nin en az iki öğretmen birçok [$_{RC}$ ***t*** sor-duğ-u] soru-yu
every student-GEN at least two teacher many ask-REL-3.POS question-ACC
cevapla-dı.
answer-PST
Lit: Every student, at least two teachers answered many of the questions that t asked.
'Every student is such that at least two teachers answered many of the questions that they asked.'
($\forall >$ at least n $>$ many)

- I should also note that this kind of split-scope cases have been reported to be impossible in English Inverse Linking.

(65) Three men danced with a woman from every city. (* $\forall > 3 > \exists$)
(Charlow, 2010: ex.5)

- The absence of split-scope in Inverse Linking is taken to support the view that DP is a scope island (Larson, 1987).

- Sauerland (2005), however, argues that this conclusion is not justified and attempts to derive the absence of split-scope in Inverse Linking by resorting to the superiority of QR (Bruening, 2001)[13].

- Further investigation is required to understand whether similar restrictions apply to Turkish.

4.2 If not precedence, then what?

- As we have observed, Turkish exhibits Scope Rigidity (Kural, 1992; Kelepir, 2001).

- Özyıldız (2017: 187-189) presents the following pair to illustrate how linear order determines relative scope of two QPs.

- As Özyıldız puts it, "linear order determines the relative scope of two quantifier phrases, regardless of what specific type of arguments the quantifier phrases are" (p.929).

(66) Çoğu editör her kitab-ı oku-du
Most editor every book-ACC read-PST.3S
'Most of the editors were such that they read every book.'
'*Every book was such that it was read by most of the editors.'

(67) Çoğu kitab-ı her editör t oku-du
Most book-ACC every editor read-PST.3S
'Most of the books are such that they were read by every editor.'
'*Every editor is such that s/he read most of the books.'

[13] See Charlow (2010) for a criticism of Sauerland's account of Larson's empirical claim.

- We have seen that a formulation of scope rigidity as in (68) is indeed good enough in most cases, but not all.

(68) α has scope over β if α precedes β

- Notice that the contrast between (69) and (69b) is not due to the relative order of [every] and [at least n].
- In the two sentences, QPs have the same relative order.

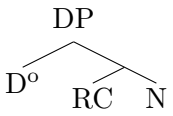
(69) a. [$_{\text{RC}}$ **En az iki öğrenci-nin** çöz-ebil-diğ-i] **her** ***t*** soru kolay-dı.
at least two student-GEN solve-ABIL-REL-POS.3 every question easy-PST
'Every question that at least two students were able to solve was easy.'
(*at least 2 > ∀)

b. **En az iki öğrenci-nin her** [$_{\text{RC}}$ ***t*** çöz-ebil-diğ-i] soru kolay-dı.
at least two student-GEN every solve-ABIL-REL-POS.3 question easy-PST
Lit: At least two students, every question that t were able solve was easy.
'At least two students were such that every question they were able to solve was easy.'
(at least 2 > ∀)

- Remember that the following LF-PF pairings gave us the relevant scope contrast:

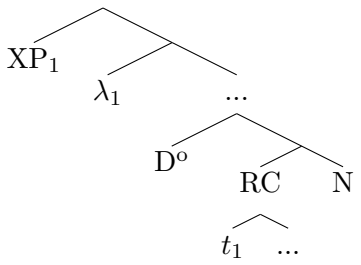
(70) a. **PF:** RC > D > N

b. **LF:**



(71) a. **PF:** XP_1 D > [$_{\text{RC}}$ t_1 ...]> N

b. **LF:**



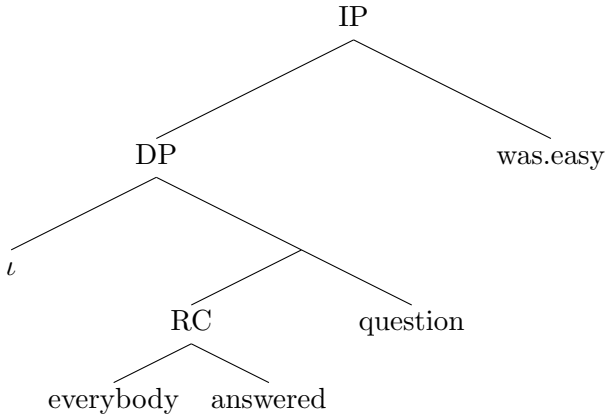
- In our particular case, RC-preposing on its own does not yield an LF in which the embedded subject can scope above the DET (i.e. due to **lack of c-command**).
- There is however, a way for speakers to signal that QR has happened even when the RC is preposed.
- This is done by breaking the prosodic phrasing of the RC:

(72) En az iki öğrenci-nin || [$_{\text{RC}}$ t_{subj} çöz-ebil-diğ-i] **her** t_{RC} soru kolay-dı.
at least two student-GEN solve-ABIL-REL-POS.3 every question easy-PST
Lit: At least two students, every question that t were able solve was easy.
'At least two students were such that every question they were able to solve was easy.'
(at least 2 > ∀, *∀ > at least 2)

- Prosodic break seems to be a general strategy to signal QR when there is no overt Determiner.

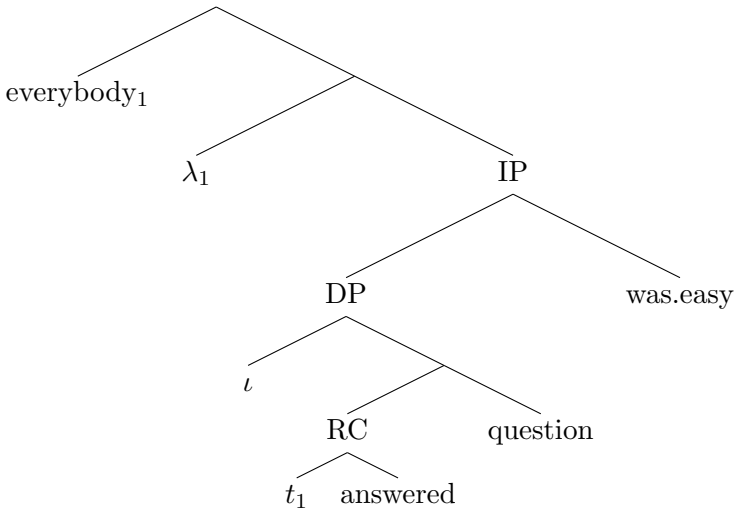
(73) a. Herkes-in cevapla-yabil-diğ-i soru kolaydı.
everybody-GEN answer-ABIL-REL-POS.3 question easy-PST
'The unique question q such that everybody was able to answer q was easy.'
(unique-question reading, *distributive reading)

b.



(74) a. Herkes-in || cevapla-yabil-diğ-i soru kolaydı.
everybody-GEN answer-ABIL-REL-POS.3 question easy-PST
'For ∀y, the unique question q that y was able to answer was easy.'
(distributive reading, *unique-question reading)

b.



- What matters, then, is that **QR, when it has taken place, must be detectable at PF.**

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