

What can't you move to the right in Turkish, and why*

Deniz Özyıldız

UMass, Amherst

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1 Introduction

- We are looking at a word order restriction in Turkish.
 - (1) **Wh- words cannot follow the predicate.** *(to be refined)*
 - a. Anane kimi dolandırdı?
grandma who swindled
Who did grandma swindle?
 - b. *Anane \triangle dolandırdı kimi?
grandma swindled who
Intended: Who did grandma swindle?
- Sentences like (1b) are *crashingly bad*: They do not even allow for echo question interpretations, known to be very permissive.
Erguvanlı Taylan (1984); Kural (1992, 1997), a.o.
- The restriction also applies to declarative and yes/no question foci.
As far as I can tell, the present proposal should cover those as well.
- Why is (1) even surprising?
Turkish is an SOV language with extensive scrambling.
 - (2) **Non wh- words can occur post-verbally.**
Anane (babay₁)₁ dolandırdı (babay₁)₂.
grandma dad swindled dad
Grandma swindled dad.
Q for position 1: Who did grandma swindle?
Q for position 2: Who swindled dad?
- Extension to other languages? Maybe.

• Goals for today:

G1: **Generalize the restriction** in (1b). *(novel observation)*
Not just verbs, but nouns and postpositions!

G2: **Restate and explain (the general) (1) in prosodic terms.**
Prosodic accounts are mentioned in the literature.
Özge & Bozşahin (2010), who cite Göksel (1998).

But:

- * Taken for granted? Kamali (2011)
- * Do not distinguish matrix from embedded scope *wh-* words.
Who do you know came? matrix *wh-* interpretation
You know who came. embedded *wh-* interpretation
We will see that the restriction only applies to matrix *wh-* words.
- * Do not formulate and check predictions.

G3: **Make and check predictions** about where *wh-* words with matrix and those with embedded interpretations are licensed.

Proposal

- I. *Wh-* words have an $L^{\uparrow}H^*$ to make felicitous matrix questions.
(Note: NOT a lexical property of *wh-* words.)
 - II. The field following the right edge of V is deaccented.
(descriptive properties)
 - III. Properties I. and II. are obligatory. *(inductive leap)*
 - IV. Properties I. and II. cannot hold at the same time.
“Items cannot simultaneously be pitch accented and deaccented.”
(general reasoning)
- \therefore A *wh-* word cannot occur after the predicate.

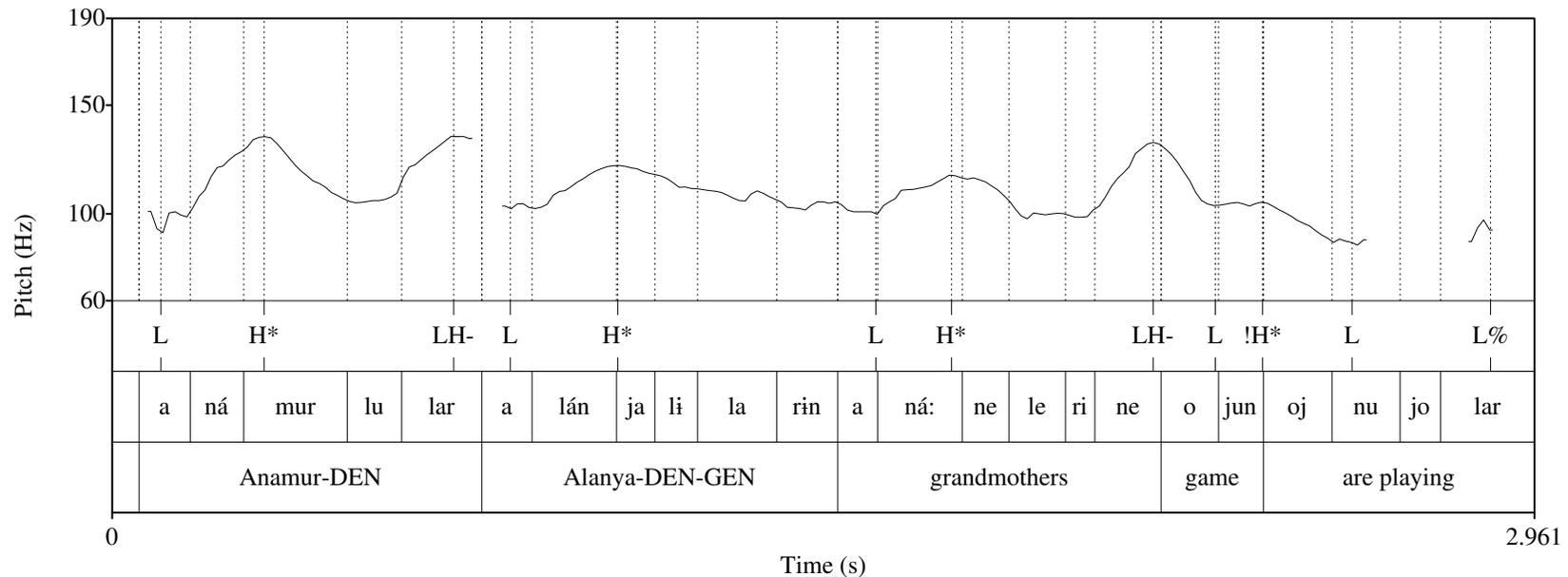
*This project is dedicated to the memory of Necla Tan. Many thanks to Kristine Yu, Rajesh Bhatt, and the 04/04/16 UMass Sound Workshop audience for feedback and discussion. Turkish examples follow orthographic conventions: *i* is *ı*, *ş* and *ç* are *ş* and *ç*, *ö* and *ü* are *ø* and *y*, *ğ* lengthens the preceding vowel. The acute accent marks lexical stress. The abbreviation DEM in glosses stands for ‘demonym.’ Recordings are of me, using a Zoom H5 with a multidirectional mic in a quiet room.

2 Background information

2.1 What does the pitch contour on a Turkish sentence look like?

- Sentence (3) is long but structurally simple. It illustrates:
 - pitch accents: HIGH (H*) on stressed syllables (maybe LH*),
 - boundary tones: LOW HIGH (LH-) at the right edge of the subject, and of the dative.
- (3) (Anámurlular) (Alányalılar-ın anáneler-in-e) (oyún oynuyolar).
 ones from Anamur ones from Alanya-GEN grandmothers-POSS-DAT game are playing
 The ones from Anamur are playing tricks on the grandmothers of the ones from Alanya.
 (Answer to: *N'oluyo?*, “What’s going on?”)

ex-sentence-track 1



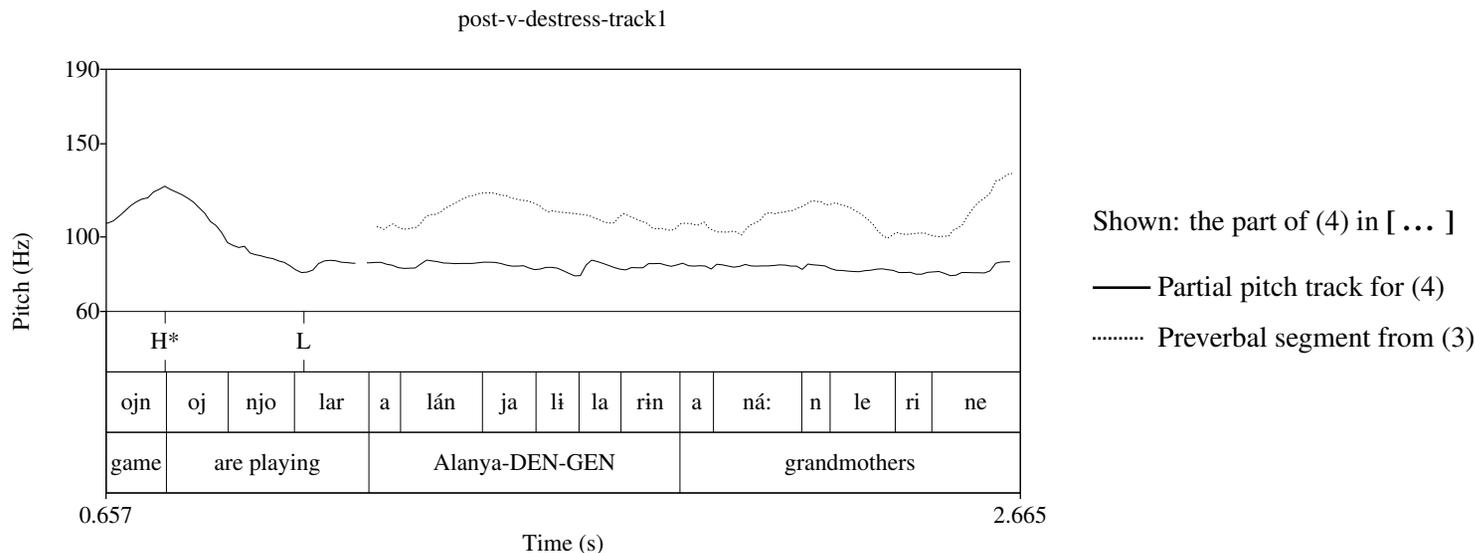
- I follow İpek & Jun (2013) and İpek (2015) for notation. This pitch track is consistent with the patterns they describe.
- Turkish words mostly have final stress. Some have non-final stress. (Sezer (1981), Kamali (2011) for an overview.) Non-finally stressed demonyms are used here to separate pitch accents from edge tones.

2.2 Deaccenting post verbally

- The post-verbal field has received much attention in the literature: What are the properties of items that occur there, what is their height, etc.
- What is important for present purposes is that **items in the post-verbal field do not have pitch accents.**

In (4) the dative DP is moved to the right of the verb. (The same string was preverbal in (3).)

- (4) Anámurlular △ [oyún oynuyolar Alányalılar-ın anáneler-in-e].
 ones from Anamur game are playing ones from Alanya-GEN grandmothers-POSS-DAT
 The ones from Anamur are playing tricks on the grandmothers of the ones from Alanya.
 (Answer to: *Anamurlular Alanyaluların ananelerine n'apıyorlar?*, “What are the ones from Alanya doing to the grandmas of the ones from Anamur?”)



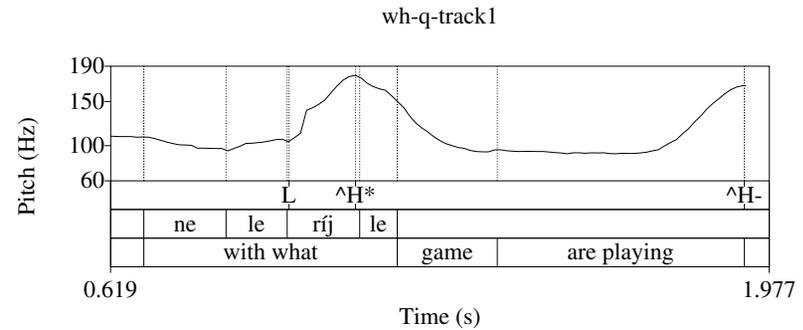
- Take away:
 - The **string after the predicate is flat.** (Compare with the dotted line, representing the same string when preverbal, from (4).)
 - This and similar sentences are perfectly grammatical, and acceptable answers to questions where post-verbal material is given information (e.g., post-verbal material has occurred in the question).
 - Deaccenting not conditioned by syntactic type, length, position of stress, etc. (One exception (Kan, 2009) is discussed in section on predictions.)
- **Further research:** Özge (2003) and Özge & Bozşahin (2010), cf., Göksel & Özsoy (2000) describe post-verbal deaccenting and also ‘post-focal deaccenting’: Everything following an H*L-L% contour gets deaccented, regardless of whether the H*L-L% contour is aligned with the right edge of the verb. Post-focal deaccenting has interesting consequences for the present material.

2.3 The prosody of *wh*- words

The *wh*- word and the answer DP are **four syllables long, with penultimate stress**.

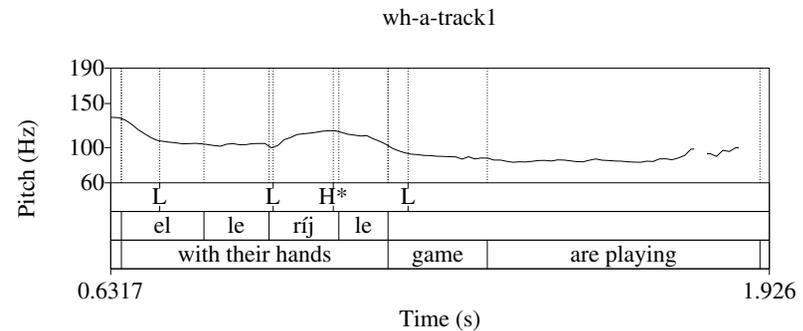
Sentence (5) is a *wh*- question.

- (5) Alányalılar [neleríyle oyún oynuyolar]?
 ones from Alanya with what game are playing
 What are the ones from Alanya playing games with?



Sentence (6) is an answer to (5).

- (6) Alányalılar [elleríyle oyún oynuyolar].
 ones from Alanya with their hands game are playing
 The ones from Alanya are playing games with their hands.



- Previous studies on (or mentions of) the intonation of questions in Turkish include: Göksel et al. (2009), Kamali (2011) and İpek (2015).
 Some properties¹:
 1. Pitch compression until *wh*- word (see full pitch tracks in appendix).
 2. **Upstepped pitch accent on the *wh*- word.** (NOT a lexical property of *wh*- word, but of questions!)
 3. Final rise.

2.4 Interim conclusion

- A range of pitch accents and boundary tones are realized pre-verbally.
- These tonal events are suppressed in the post-verbal field.
- Matrix question *wh*- words have an L[↑]H* pitch accent, whereas non-*wh*- counterparts, with the same metrical structure, are not upstepped.

¹1. and 2. are common to both *wh*- and yes/no questions; 3. is only observed in *wh*- questions.

3 Deaccented fields generalized

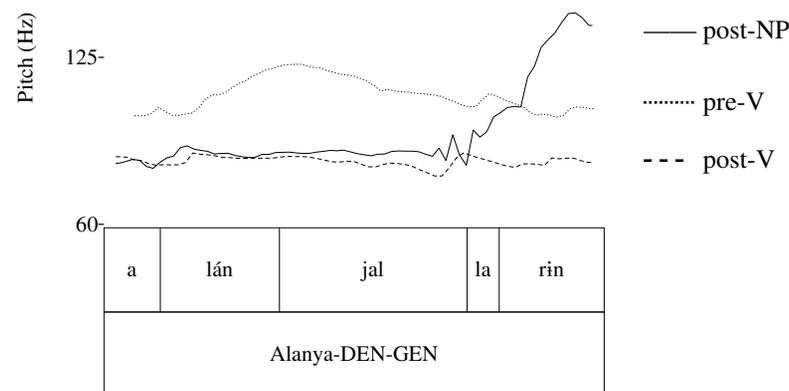
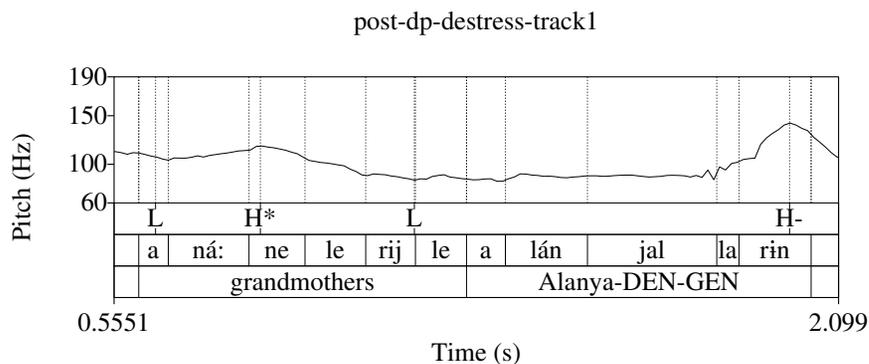
- Novel evidence from possessives suggests that **deaccenting extends to the ‘post nominal’ field as well.**
- We look at the phrases in (7) and (8). In (7), possessor “people from Anamur” follows possessum “grandmas.” In (8), the order is **flipped**.

(7) POSSESSOR POSSESSUM Alányalıların anánelerine Alanya-DEM-GEN grandmothers the grandmothers of the ones from Alanya	(8) POSSESSUM POSSESSOR anánelerine Alányalıların grandmothers Alanya-DEM-GEN the grandmothers of the ones from Alanya
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- The pitch track in (8) shows that “Alányalıların” does not have a pitch accent when it comes after the possessum “grandmas.” (There is a HIGH at the right edge.)

(9) Pitch track for (8) – elicited in neutral sentence frame

(10) Comparison: 3 tokens of “A.lán.ya.lı.la.rın”



- Post-verbal and post-nominal material patterns similarly: No pitch accents! (A similar effect can be reproduced with PPs.)
- This observation motivates the following **generalization**:

(11) The field between the right edge of a syntactic head X and the right edge of the XP is deaccented.

a. [VP [VP ... Δ ... V] ↓DP]

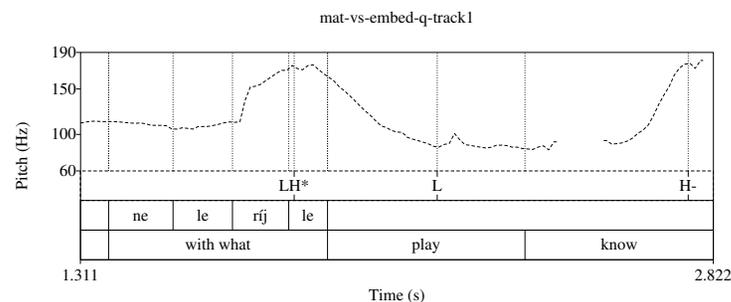
b. [DP₁ [DP₁ ... Δ ... D₁] ↓DP₂]

- Turkish is head-final: The head of a phrase is at the right edge unless movement. Deaccenting is “local.”

4 The intonation of matrix vs embedded questions

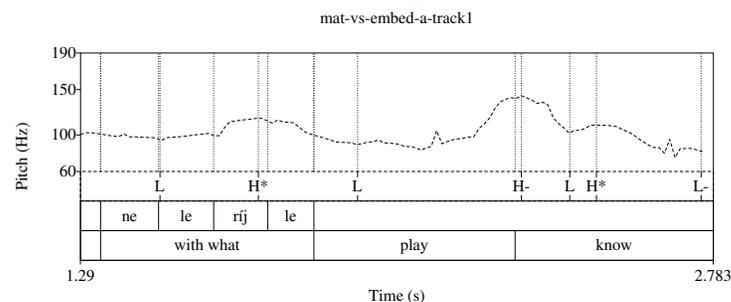
(12) (Section 2.3:) **matrix *wh*- words have upstepped pitch accent.**

Alányalılar Anámurluların [neleríyle oynadıđını biliyo]?
 Alanya.DEN.P Anamur.DEN.P with what are playing know
 What do the ones from Alanya know that the ones from Anamur are playing games with? (Question.)



(13) **Embedded *wh*- words do NOT have upstepped pitch accent.**

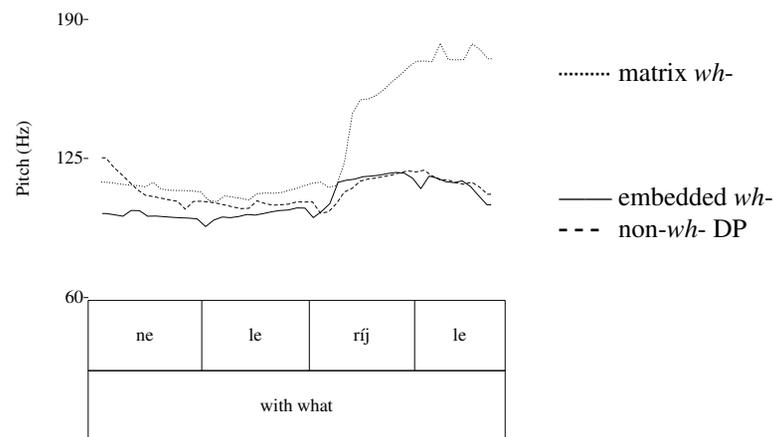
Alányalılar Anámurluların [neleríyle oynadıđını biliyo].
 Alanya.DEN.P Anamur.DEN.P with what are playing know
 The ones from Alanya know what the ones from Anamur are playing games with. (Declarative.)



- The L[↑]H* pitch accent is specific to matrix scope *wh*- words. This is not a lexical property! Embedded scope *wh*-words pattern like non-*wh*-words.
- Without L[↑]H*, question interpretation unavailable.

(14) **Obligatory property of matrix *wh*- questions:**
 In matrix questions, *wh*- words bear L[↑]H*.

(15) Comparison: matrix and embedded *wh*- and lexical DP



5 Building it back up

- Post-verbal and post-nominal fields are deaccented: No pitch accents!

- (16) a. [VP [VP ... Δ ... V] \downarrow DP]
 b. [DP₁ [DP₁ ... Δ ... D₁] \downarrow DP₂]

- Matrix question *wh*- words **must** be accented:
- The two requirements cannot be satisfied simultaneously.

→ Matrix question *wh*- words cannot occur post-verbally.²

6 Predictions

General idea: The present result should tell us about other environments where *wh*- are grammatical or ungrammatical.

6.1 Prediction 1: *wh*- possessors

- (17) ✓ If the post-nominal field is deaccented, expect no matrix scope *wh*- word there.
- (18) a. Anane [kimin babasına] oyun oynadı
 grandma whose dad game played
 Whose dad did grandma play tricks on?
- b. *Anane [Δ babasına \downarrow kimin] oyun oynadı?
 grandma dad whose game played
 Intended: Whose dad did grandma play tricks on?

6.2 Prediction 2: Availability of embedded question interpretations

- (19) ✓ In those positions where matrix *wh*- are ungrammatical, expect embedded *wh*- words to be grammatical.
 (Embedded *wh*- words do not have L \uparrow H*.)

(20) Post-verbal

Ananenin [Δ dolandırdığı] biliyorum **kimi**.
 grandma swindle I know whom
 I know who grandma swindled. *post-verbal ok*

(21) Post-nominal

? Anane benim [Δ babasını **kimin**] dolandırdığı biliyo.
 grandma I dad whose swindled knows
 Grandma knows whose dad I swindled. *post-nominal ok*

Both (20) and (21) are * under matrix question interpretation.

6.3 Prediction 3: Matrix question interpretations post-verbally

Kan (2009): There is at least one exception to post-verbal deaccenting: Complement clauses introduced by *ki*, “that,” are not deaccented.

- (22) ✓ Expect matrix question *wh*- words to be grammatical in *ki* complement clauses.
- (23) **Baseline declarative**
 Anane sanıyo ki [Anamurlular dolandırıldı]. Grandma be-
 grandma believes that ones from A. got swindled
 lieves that the ones from Anamur got swindled.
- (24) **Matrix *wh*- question**
 Anane sanıyo ki [**kimler** dolandırıldı]?
 grandma believe that who got swindled
 Who does grandma believe got swindled?

7 Concluding remarks

- A general word order restriction, explained by prosodic constraints.
- **Further research:**
 - Larger scale controlled study.
 - Underlying causes for our prosodic constraints?

²**A concern?** An anonymous reviewer points out that this account runs the risk of being a technical reformulation of an *ad hoc* constraint.

This is not the case: Our descriptive properties are general. If we assume that they must hold, the restriction follows. (The restriction itself is not stated.) The present account also make predictions, *ad hoc* constraints do not.

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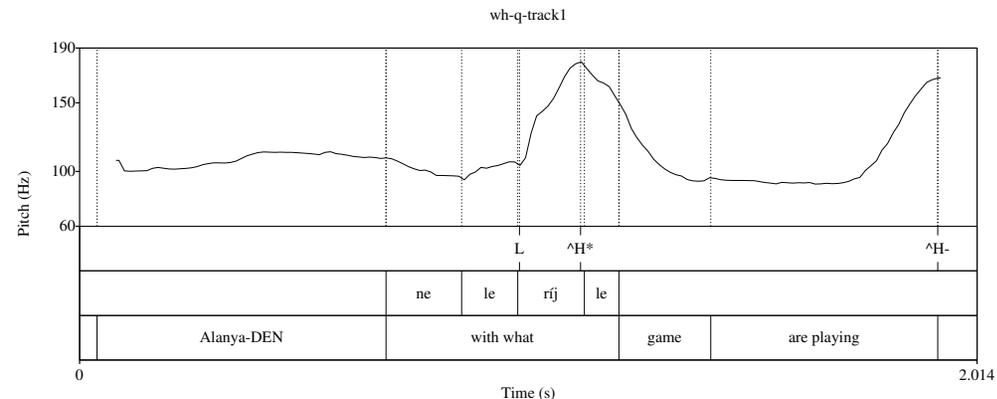
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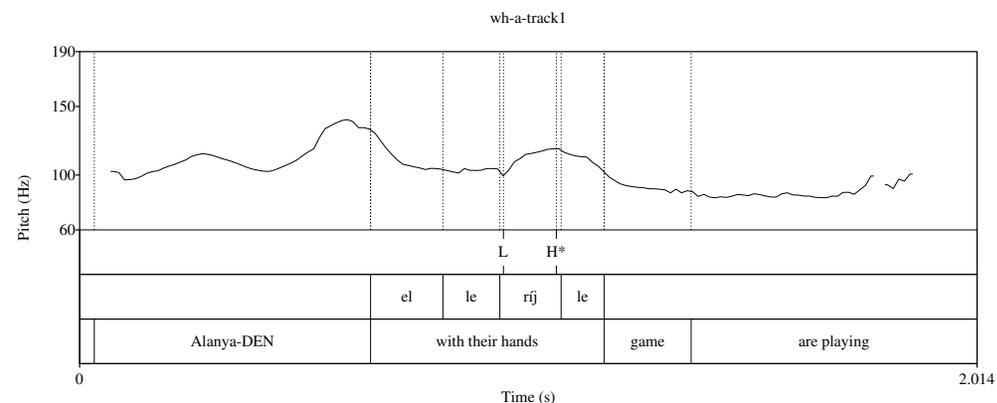
Appendix

7.1 Full question and answer

(25) Alányalılar neleríyle oyún oynuyolar?
 ones from Alanya with what game are playing
 What are the ones from Alanya playing games with?

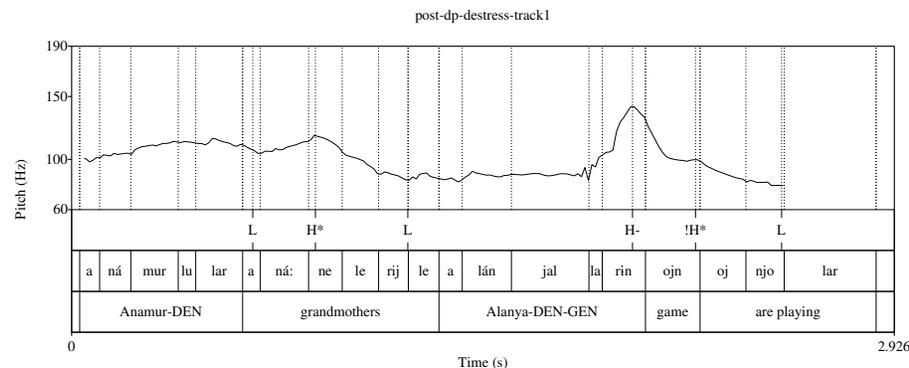


(26) Alányalılar elleríyle oyún oynuyolar.
 ones from Alanya with their hands game are playing
 The ones from Alanya are playing games with their hands.



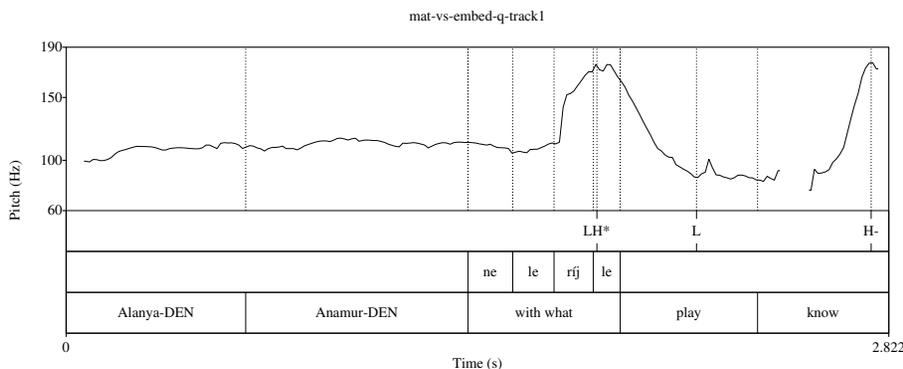
7.2 Full pitch track for DP destressing

- (27) (Anamurlular) Δ (ananelerine Alanyalıların) (oyun oynuyorlar).
 Anamur.DEN grandmas Alanya.DEN.GEN game are playing
 The ones from Anamur are playing tricks on the grandmothers
 of the ones from Alanya.
 (Answer to: *N'oluyo?*, “What’s going on?”)



7.3 Full pitch tracks for matrix vs. embedded questions

- (28) (Section 2.3:) **matrix *wh*- words have upstepped pitch accent.**
 Alányalılar Anámurluların [neleriyle oynadığını biliyo]?
 Alanya.DEN.P Anamur.DEN.P with what are playing know
 What do the ones from Alanya know that the ones from Anamur
 are playing games with? (Question.)



- (29) **Embedded *wh*- words do NOT have upstepped pitch accent.**
 Alányalılar Anámurluların [neleriyle oynadığını bilíyo].
 Alanya.DEN.P Anamur.DEN.P with what are playing know
 The ones from Alanya know what the ones from Anamur are
 playing games with. (Declarative.)

