

Prosodic marking of syntactic heads
On post-head pitch compression in Turkish
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In Turkish – a head-final, SOV language – constituents that are reordered to a position that follows the verb cannot receive prosodic prominence (this is *post-verbal pitch compression*, or *PVPC*). This observation has been discussed in the literature in terms of syntax, prosody, and information structure (Erguvanlı 1979, 1984, Kural 1997, Göksel 1998, Göksel and Özsoy 2000, Özge 2003, Kornfilt 1998, 2005, Özge and Bozşahin 2010, Güneş 2013a, b, *i.a.*) (1).¹

- (1) a. ((Ali)_Φ (OKUL-A_N git-ti)_Φ)_ι
 Ali school-DAT go-PST
 ‘Ali went to school.’
- b. GİTTİ Ali okula.
 c. ALI gitti okula.
 d. * Gitti Ali OKULA.
 e. * Gitti ALI okula.

From a prosodic perspective, the utterance in (1a) is an intonational phrase (ι), in which the N-marked constituent (the *nucleus*) is the prosodically prominent item of the utterance. From a syntactic perspective, the sentences in (1) are root clauses, with a finite verb as their lexical syntactic head. For the cases of (1b) and (1c), the ban on pitch prominence on the reordered items is considered as an indication of the informational structural status of these items (i.e. discourse given topics/ background, etc.).

Unnoticed in the previous literature is that the same prohibition on prominence-assignment is attested in phonological phrase (Φ) level prosodic constituents that are mapped from non-finite CPs, NPs, certain APs, possessive phrases, certain postpositional phrases, etc. Specifically, any XP that allows rightward reordering (reordering to the right of their head) is subject to obligatory pitch compression on their reordered constituents. Thus, PVPC is an instantiation of a broader phenomenon, *post-head pitch compression* (PHPC), which is not only observed in ι-level prominence-marking, but also in Φ-level prominence relations.

- (2) *Nominalized clauses*² (where boldface denotes a syntactic **head**)
- a. [NOM-CL Ders-i-ne **çalış-an**] çocuk sınıf-ı geç-er.
 lesson-POSS-DAT study-NOM child class-ACC pass-AOR
 ‘The child who studies his/her homework passes the class.’

¹ SMALL CAPS denotes prosodic prominence on the ι and/or Φ level, _N denotes sentence level nuclear prominence, square brackets denote syntactic constituency, regular brackets denote prosodic constituency and smaller fonts denote pitch compression.

² In (2), the head to which I refer is not the head of the relative clause construction (in this case, *çocuk* ‘child’) but the head of the modifying clause (i.e. the nominalized verb). In constructions like (2), the nominalized clause (or a constituent thereof) cannot reorder to the right *çocuk*.

b. ((**ÇALIŞ-AN** ders-i-ne çocuk)_Φ (sınıf-_{1N} geç-er)_Φ)_t.
 study-NOM lesson-POSS-DAT child class-ACC pass-AOR
 ‘The child who studies his/her homework passes the class.’

b'. * ((**Çalış-an** DERS-i-NE çocuk)_Φ (sınıf-_{1N} geç-er)_Φ)_t.
 study-NOM lesson-POSS-DAT child class-ACC pass-AOR
 ‘The child who studies his/her homework passes the class.’

(3) *Possesive constructions*

a. [ALI-NIN **kitab-ı-nı**] ev-e_N getir-di.
 Ali-GEN book-POSS-ACC home-DAT bring-PST
 ‘He brought Ali’s book home.’

b. ((**KITAB-I-NI** Ali-nin)_Φ (ev-e_N getir-di)_Φ)_t.
 Book-POSS-ACC Ali-GEN home-DAT bring-PST
 ‘He brought Ali’s book home.’

b'. * ((**Kitab-ı-nı** ALI-NIN)_Φ (ev-e_N getir-di)_Φ)_t.
 Book-POSS-ACC Ali-GEN home-DAT bring-PST
 ‘He brought Ali’s book home.’

(4) *Clausal coordination*

a. [Ali ev-e **gel-ip**] elma-yı ye-di.
 Ali home-DAT come-CONVERB apple-ACC eat-PST
 ‘Ali came home, and ate the apple.’

b. ((**GEL-IP** ev-e Ali)_Φ, (elma-yı_N ye-di)_Φ)_t.
 come- CONVERB home-DAT Ali apple-ACC eat-PST
 ‘Ali came home, and ate the apple.’

b'. * ((Gel-**ip** EV-E Ali)_Φ, (elma-yı_N ye-di)_Φ)_t.
 come- CONVERB home-DAT Ali apple-ACC eat-PST
 ‘Ali came home, and ate the apple.’

(5) *Adverbial Clauses*

a. [Ali ev-e **gel-ince**] elma-yı_N ye-di.
 Ali home-DAT come- CONVERB apple-ACC eat-PST
 ‘When Ali came home, he ate the apple.’

b. ((Ali **GEL-İNCE** ev-e)_Φ (elma-yı_N ye-di.)_Φ)_t.
 Ali come- CONVERB home-DAT apple-ACC eat-PST
 ‘When Ali came home, he ate the apple.’

b'. * ((Ali gel-**ince** EV-E)_Φ (elma-yı_N ye-di.)_Φ)_t.
 Ali come- CONVERB home-DAT apple-ACC eat-PST
 ‘When Ali came home, he ate the apple.’

(6) *Partitive constructions*

- a. [Elma-lar-dan **yedi tane-si**] çürük_N çık-tı.
apple-PL-ABL seven piece-POSS rotten come.out-PST
'Seven of the apples turned out to be rotten.'
- b. ((**YEDI tane-si** elma-lar-dan)_Φ (çürük_N çık-tı.)_Φ)_ı
seven piece-POSS apple-PL-ABL rotten come.out-PST
'Seven of the apples turned out to be rotten.'
- b'. * ((**Yedi tane-si** ELMA-LAR-DAN)_Φ (çürük_N çık-tı.)_Φ)_ı
seven piece-POSS apple-PL-ABL rotten come.out-PST
'Seven of the apples turned out to be rotten.'

(7) *Noun Phrases with certain adjectival modification*

- a. Ali [ev-de-ki **elma-lar-ı**] Aylin-e ver-di.
Ali home-LOC-ki apple-PL-ACC Aylin-DAT give-PST
'Ali gave Aylin the apples at home.'
- b. ((Ali)_Φ (**ELMA-LAR-I** ev-de-ki)_Φ (Aylin-e_N ver-di.)_Φ)_ı
Ali apple-PL-ACC home-LOC-ki Aylin-DAT give-PST
'Ali gave Aylin the apples at home.'
- b'. * ((Ali)_Φ (**elma-lar-ı** EV-DE-KI)_Φ (Aylin-e_N ver-di.)_Φ)_ı
Ali apple-PL-ACC home-LOC-ki Aylin-DAT give-PST
'Ali gave Aylin the apples at home.'

(8) *Post-positional phrases*

- a. [Kapı-dan **içeri-ye**] Ali-nin anne-si gir-di.
door-ABL inside-DAT Ali-GEN mother-POSS enter-PST
'Ali's mother has entered from the door.'
- b. ((**İÇERİ-YE** kapı-dan)_Φ (Ali-nin)_Φ (anne-si_N gir-di.)_Φ)_ı
inside-DAT door-ABL Ali-GEN mother-POSS enter-PST
'Ali's mother has entered from the door.'
- b'. * ((**İçeri-ye** KAPI-DAN)_Φ (Ali-nin)_Φ (anne-si_N gir-di.)_Φ)_ı
inside-DAT door-ABL Ali-GEN mother-POSS enter-PST
'Ali's mother has entered from the door.'

The data show that, PVPC is only an instance head marking on the level of the *ı*. In light of this novel observation, previous explanations of the PVPC that cannot be extended to cover PHPC must be abandoned or revised.³ Whether the obligatory pitch compression is directly related to

³ Specifically, syntactic accounts that treat the post-verbal position as related to a high syntactic functional projection reserved for [+topic]-marked constituents (such as Kural 1997; Kornfilt 1998, 2005; Şener 2010, among others) must be amended. To see why, consider (3) above. (3a) is a congruent answer to question like *Ali'nin kitabını nereye getirdi?* 'Where did he bring Ali's book?'; where *eve* 'to home' is the focus, and *Ali'nin kitabı* 'Ali's book' is backgrounded. In (3b), reordering occurs

information structural status of the items that are reordered to the right of their heads; or the compression is primarily because of the linear distribution of these items with respect to their syntactic heads are issues that require further investigation.

Also, languages other than Turkish that display PVPC should be examined to discover whether, in these languages, PVPC is only an instantiation of PHPC on the level of t or the Φ .

The observation that the formation of prosodic constituents within certain languages is strictly related to the linear order of the constituents with respect to their syntactic heads will hopefully shed more light on our understanding of the syntax-prosody mapping mechanisms. Furthermore, this phenomenon may be employed to diagnose syntactic heads.

Overall, the fact that constituents cannot receive pitch prominence when they are reordered to the right is a topic that requires further inquiry in terms of syntax, prosody, and information structure.

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within the phrase *Ali'nin kitabı*. This reordering cannot be triggered by a desire to check [+topic]-features, as the phrase [*Ali'nin kitabı*]_{TOPIC} has no focus-background structure of its own: it contains no focus, and thus, no topic.