

# Scrambling in Turkish

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## 1 Turkish word order

Turkish is a head-final language where modifiers or specifiers always precede the heads of all phrases.

- (1) a. *bayağı* *sakin* *bir* *şehir*  
pretty calm one city  
'a pretty calm city'
- b. *istasyon-un* *arka-sın-da-ki* *meydan*  
station-GEN behind-POSS-LOC-REL.CL square  
'the square behind the station'
- c. *Ayşe için*  
Ayşe for  
'for Ayşe'

The examples in (1a) and (1b) illustrate the head-final nature of nouns and (1c) does so for adpositions. We observe the same characteristics in verb phrases, where the complements or adjuncts precede the verb head.

- (2) *Ayşe harıl harıl çanta hazırlı-yor.*  
Ayşe zealously bag pack-PRES.PROG  
'Ayşe is packing her bag zealously.'

In (2) both the subject *Ayşe*, the object *çanta* 'bag' and the adverb *harıl harıl* 'zealously' precede the verb.

It is argued that Turkish exhibits a canonical SOV constituent order (see Erguvanlı 1984 among others). And yet, it allows for flexibility in the ordering of its constituents hence is characterized as a free word order language.

- (3) a. *Ali kitab-ı çevir-di* SOV  
Ali book-ACC translate-PST  
'Ali translated the book.'
- b. *Kitab-ı Ali çevir-di* OSV
- c. *Kitab-ı çevir-di Ali* OVS
- d. *Ali çevir-di kitab-ı* SVO
- e. *Çevir-di Ali kitab-ı* VSO
- f. *Çevir-di kitab-ı Ali* VOS

The word order variation is triggered by information structure (see Göksel & Özsoy 2000, İşsever 2000 among others), thus each order in (3) has its own pragmatic notion.

On the other hand, there is a morphosyntactic constraint which prevents the flexibility of the direct object under circumstances where it does not bear an overt accusative case marking. However, there are certain conditions that allow the scrambling of bare object NPs, as well.

Section 2 discusses word order variations in Turkish. Section 3 proposes an HPSG analysis and Section 4 is the conclusion.

## 2 Scrambling

### 2.1 Simple sentences

Word order variation in Turkish is influenced by information structure. Previous research shows that in Turkish the sentence-initial position typically hosts the topic, while the pre-verbal area is considered to be the default focus position. Elements that are given as background information, or added as an afterthought, occur in the post-verbal domain (İşsever 2000, among others).

- (4) *Ayşe* DÜN dön-dü Ankara'dan.  
Ayşe yesterday return-PST Ankara-ABL  
'It was yesterday when Ayşe came back from Ankara.'

In (4), the subject given in italics is the topic, the adverb in small capitals is the focus of the sentence while the PP that appears in the post-verbal position is background information. These roles are assigned syntactically by default and we assume that there is no discourse-related contrasting information involved.

#### 2.1.1 Non-case-marked direct objects

In addition to the pragmatic grounds, Turkish word order variation is restricted by a morphosyntactic constraint which involves the encoding of specificity. In Turkish, indefinite and non-specific direct objects appear without the overt accusative case marker. The absence of case morphology results in a bare NP object which is argued to be syntactically restricted to the immediate pre-verbal position (Erguvanlı 1984: 5):

- (5) *Mutluluk* huzur getir-ir.  
happiness peace bring-AOR  
'Happiness brings peace of mind.'  
'Peace of mind brings happiness.' (unavailable reading)

However, evidence suggests that bare object NPs in Turkish are not strictly confined to the immediate pre-verbal position (see Sezer 1996, Aygen 2002, Uygun 2006 among others).

Sezer (1996) proposes that the post-verbal area is accessible for these objects for backgrounding.

- (6) *Ali* oku-du kitap.  
Ali read-PST book  
'Ali has read a book.'

Furthermore, Aygen (2002) argues that a bare object with a generic reading can occupy the sentence-initial topic position:

- (7) Kitap ben çok sev-er-im.  
 book I a.lot like-AOR-1SG  
 ‘I like books a lot.’

Uygun (2006) also highlights their capacity for topicalization showing that an element does not have to be specific in order to be available for topicalization. She demonstrates with the example in (8) that bare object NPs can be discourse-linked through a type-supertype relation, where the scrambled object is linked to a previously mentioned category in the discourse.

- (8) A: Ali ve Ayşe’nin kız-ı ol-muş  
 Ali and Ayşe.GEN girl-POSS.3SG be-EVID  
 ‘Ali and Ayşe had a girl (baby)’  
 B: Çocuk biz de isti-yor-uz ama ...  
 child we too want-PROG-1PL but  
 ‘We want children too, but ...’

This suggests that the eligibility for scrambling is not only a matter of morphological marking, but is tied to how the information is anchored within the conversational context, as well.

In addition to the above-mentioned circumstances, pronouns may follow bare object NPs.

- (9) A: Dün hiç fotoğraf ya da video çek-e-me-di-m, sen-de var mı?  
 yesterday any photograph or video take-ABIL-NEG-PST-1SG you-LOC exist Q  
 ‘I couldn’t take any photographs or videos yesterday, do you have (any)?’  
 B: Var, evet. Birkaç fotoğraf ben gönder-ir-im sana.  
 exist yes a.few photograph I send-AOR-1SG you.DAT  
 ‘Yes, I do. I’ll send you a few photographs.’

The topicalization here is made possible both via discourse-link and via the fact that subject pronouns do not cause an ambiguity, since they are distinguishable from bare objects, both of which appear without case marking.

## 2.2 Embedded clauses

Long-distance pre- or post-verbal scrambling is also possible in Turkish. Elements are allowed to be topicalized or backgrounded out of their own clause. However, the syntactic flexibility established so far is notably reduced when it comes to scrambling within the embedded clause. The example (10) is given in Kornfilt (2019: 44).

- (10) a. [[Hasan-ın  $\text{---}_i$  yaz-dığ-ın-ı] bil-iyor-um] makale-yi.  
 Hasan-GEN write-NOM-3SG-ACC know-PROG-1SG article-ACC  
 ‘I know that Hasan wrote the article.’  
 b. \* [[Hasan-ın  $\text{---}_i$  yaz-dığ-ın-ı] makale-yi] bil-iyor-um.  
 Hasan-GEN write-NOM-POSS.3SG-ACC article-ACC know-PROG-1SG  
 ‘I know that Hasan wrote the article.’

While Turkish permits scrambling to the right of the verb, there is a restriction on local reordering of constituents within embedded structures. A component of an embedded clause cannot occur to the immediate right of its own predicate. Instead, if that sub-constituent is to be placed in a post-verbal position, it must be post-posed to the right of the matrix predicate.

### 3 Analysis

Information structure, which has been argued to be the primary determinant of word order flexibility in Turkish, is represented in the framework of HPSG by researchers such as De Kuthy (2002), Paggio (2009) and Song & Bender (2012). Below is De Kuthy’s (2002) analysis:

- (11) The structure of INFO-STRUC in De Kuthy (2002: 165):

$$\left[ \begin{array}{ll} \text{sign} & \\ \text{PHON} & \text{list} \\ \text{SYNSEM} & \text{synsem} \\ \text{INFO-STRUC} & \left[ \begin{array}{ll} \text{info-struc} & \\ \text{FOCUS} & \text{list-of-mes} \\ \text{TOPIC} & \text{list-of-mes} \end{array} \right] \end{array} \right]$$

The information structure is encoded in an attribute called INFO-STRUC given as a linguistic sign. This attribute has two main features: FOCUS and TOPIC. The values of these features are lists of meaningful expressions as seen in Sailer’s (2000) framework (De Kuthy 2024).

Engdahl & Vallduví (1996) assume the LP statement on Catalan, which gives us the linearization principles with respect to the information structure in Turkish as well:

- (12) LP constraint on information structure in Catalan (adapted from Engdahl & Vallduví 1996: 65):

$$\text{LINK} > \text{FOCUS} > \text{TAIL}$$

The syntax that allows for the LP constraints be realized in the language is described in the following.

#### 3.1 Binary branching

Turkish scrambling has been analysed by Güngördü (1997) within the framework of HPSG. She assumes a flat structure to account for its properties, noting that scrambling adjuncts poses a major problem for such an analysis in that lexical heads combine with all their non-subject complements at once. Instead of a flat structure analysis, I assume, following Müller (2024), a binary-branching analysis to explain the two canonical orders SOV and OSV in Turkish.

- (13) Head-Complement Schema (binary branching):

*head-complement-phrase*  $\Rightarrow$

$$\left[ \begin{array}{ll} \text{SYNSEM|LOC|CAT|COMPS} & \boxed{1} \oplus \boxed{2} \\ \text{HEAD-DTR} & [\text{SYNSEM|LOC|CAT|COMPS } \boxed{1} \oplus \langle \boxed{3} \rangle \oplus \boxed{2}] \\ \text{NON-HEAD-DTRS} & \langle [\text{SYNSEM } \boxed{3}] \rangle \end{array} \right]$$

The schema in (13) indicates that the COMPS list of the head daughter is divided into three lists: an initial list ( $\boxed{1}$ ), a list containing one element  $\boxed{3}$ , and the remaining list ( $\boxed{2}$ ). The element  $\boxed{3}$  is identified with the SYNSEM value of the non-head daughter. The other elements of the head daughter’s COMPS list are combined, and the concatenation of the first and last lists ( $\boxed{1} \oplus \boxed{2}$ ) constitutes the COMPS list of the mother node (Müller 2024: 401).

### 3.2 Extraposition

Post-verbal scrambling of constituents is characterized as extraposition and as non-local (or unbounded) dependencies (Borsley & Crysmann 2024). To capture the properties of extraposition, researchers (Keller 1995, Müller 1999: 225–227) use a separate non-local feature called EXTRA. This distinguishes it from standard extraction because extraposition moves to the right and follows different locality rules.

(14) Complement Extraposition Lexical Rule:

$$\left[ \begin{array}{l} \text{COMPS } \boxed{1} \oplus \left\langle \left[ \text{LOC } \boxed{4} \left[ \text{CAT } \left[ \begin{array}{l} \text{HEAD } \textit{verb} \vee \textit{prep} \\ \text{COMPS } \langle \rangle \end{array} \right] \right] \right\rangle \oplus \boxed{2} \right. \\ \left. \text{NONLOC|EXTRA } \boxed{3} \right] \mapsto \left[ \begin{array}{l} \text{COMPS } \boxed{1} \oplus \boxed{2} \\ \text{NONLOC|EXTRA } \boxed{3} \cup \{\boxed{4}\} \end{array} \right]$$

The rule in (14), which can also be found in Keller (1995: 303) and Borsley & Crysmann (2024: 608), simply dislocates an element from the COMPS list to insert its LOCAL value into the EXTRA set.

For adjunct extraposition, Borsley & Crysmann (2024: 608) give the rule below.

(15) Adjunct Extraposition Lexical Rule:

$$\left[ \begin{array}{l} \text{LOC } \boxed{2} \left[ \text{CAT|HEAD } \textit{noun} \vee \textit{verb} \right] \\ \text{NONLOC|EXTRA } \boxed{1} \end{array} \right] \mapsto \left[ \begin{array}{l} \text{LOC|CONT } \boxed{3} \\ \text{NONLOC|EXTRA } \boxed{1} \cup \left\{ \left[ \text{CAT } \left[ \begin{array}{l} \text{HEAD } \left[ \begin{array}{l} \textit{prep} \vee \textit{rel} \\ \text{MOD|LOC } \boxed{2} \end{array} \right] \\ \text{CONT } \boxed{3} \end{array} \right] \right] \right\} \end{array} \right]$$

The adjunct extraposition rule in (15) inserts a modifier into the EXTRA set.

### 3.3 Scrambling bare object NPs

Non-case marked object NPs can be scrambled under circumstances where arguments are distinguishable from each other. As Müller (2023a: 24) also concludes, in OV languages, scrambling is forbidden when elements are unidentifiable.

## 4 Conclusion

In this study, the Turkish word order variation is (re)investigated and a binary branching HPSG account has been proposed. The analysis is framed around the head-final characteristics of the language, implying that Turkish has two canonical word orders SOV and OSV and categorizes other orderings as marked orders.

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