

Adverbs and Functional Heads in Turkish: Linear Order and Scope*

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1 Introduction

Our goal in this paper is to investigate the linear order and scope of adverbs and functional heads in Turkish, especially with reference to Cinque's (1999) recent proposal that there is a universal hierarchy of functional heads. We argue that the Turkish data motivate semantic scope rather than a fixed hierarchy as the main determinant of the linear order of adverbs and functional heads.

We start by outlining the basics of Turkish morphosyntax, and Cinque's theoretical proposal. Then we discuss adverbs in Turkish, and show that the order in which multiple adverbs occur depends upon their relative scope. This is followed by a discussion of tense/aspect/mood suffixes; we argue that similar principles determine the orders in which they occur. Finally we suggest that language-particular morphological restrictions can introduce idiosyncrasies into the picture.

2 Outline of Turkish Morphosyntax

Turkish is often cited as a prototypical SOV language, and indeed this is the most common word order:

- (1) Emine elma-yı ye-di.¹
Emine apple-ACC eat-PAST.3sg
'Emine ate the apple.'

However, any of the six possible permutations of the words in (1) could be preferred according to the pragmatic context. Factors determining word order include focus, topicalization, backgrounding, definiteness and specificity (Erguvanlı 1984; Kornfilt 1997).

As in many nonconfigurational languages, arguments are related to the verb through case marking.

Turkish is an exclusively suffixing language. Verbs are marked for tense, aspect, mood and polarity (TAMP), and subject agreement. Usually there are at least two suffixes per verb, and often many more. A simple example is given in (2) and a more complex example in (3):

- (2) İstanbul-a gid-iyor-um.
 İstanbul-DAT go-PROG-1sg
 'I am going to İstanbul.'
- (3) İstanbul-a git-me-yecek-ti-m.
 İstanbul-DAT go-NEG-FUT-PAST-1sg
 'I wasn't going to go to İstanbul.'

Suffixes often mark some combination of TAMP values, for example, the progressive aspect in (2) implies present tense. There are also derivational suffixes (passive, causative, etc.) which won't be relevant in this paper.

Note that extensive vowel harmony, voicing assimilation, and other phonological processes, result in considerable variation in the surface forms of morphemes.

3 Cinque's Proposal

In an important recent book, Cinque (1999) has shown that the linear order of adverbs and functional heads cross-linguistically is much more systematic than had previously been assumed. Specifically, he proposes that there is a universal hierarchy of functional heads, and that particular adverbs or functional elements always occur in particular places in this hierarchy.

Here is one of the Cinque's versions of the hierarchy:

- (4) [*frankly* Mood_{speech act} [*fortunately* Mood_{evaluative} [*allegedly* Mood_{evidential} [*probably* Mod_{epistemic} [*once* T(Past) [*then* T(Future) [*perhaps* Mood_{irrealis} [*necessarily* Mod_{necessity} [*possibly* Mod_{possibility} [*usually* Asp_{habitual} [*again* Asp_{repetitive(I)} [*often* Asp_{frequentative(I)} [*intentionally* Mod_{volitional} [*quickly* Asp_{celerative(I)} [*already* T(Anterior) [*no longer* Asp_{terminative} [*still* Asp_{continuative} [*always* Asp_{perfect(?)} [*just* Asp_{retrospective} [*soon* Asp_{proximative} [*briefly* Asp_{durative} [*characteristically(?)* Asp_{generic/progressive} [*almost* Asp_{prospective} [*completely* Asp_{SgCompletive(I)} [*tutto* Asp_{PlCompletive} [*well* Voice [*fast/early* Asp_{celerative(II)} [*again* Asp_{repetitive(II)} [*often* Asp_{frequentative(II)} [*completely* Asp_{SgCompletive(II)} (Cinque 1999: 106)

This huge hierarchy basically takes the place of TP. The location of AgrSP relative to these functional heads seems to vary from language to language and even within languages. Adverbs occupy specifier positions, whereas heads are realized morphologically. The theory implies that affixes are picked up by the verb which must undergo movement up the tree.

Cinque's proposed hierarchy is based primarily on data from Italian and French, generally pairs such as this:

- (5) a. Alle due, Gianni non ha solitamente mica mangiato, ancora.
 'At two, Gianni has usually not eaten yet.'
- b. *Alle due, Gianni non ha mica solitamente mangiato, ancora.
 'At two, Gianni has not usually eaten yet.' (Cinque 1999)

Data from numerous other languages, including Turkish, are also cited.

4 Adverbs in Turkish and their Relative Ordering

The canonical position for adverbs in Turkish is immediately before the verb:

- (6) Ahmet hızlı koş-uyor-du.
 Ahmet quickly run-PROG-PAST.3sg
 'Ahmet was running quickly.'

However in practice, there is a great deal of flexibility.

When there is more than one adverb, there is usually a preference for one possible order over the other, or often one of the options is simply ungrammatical. We systematically examined pairs of adverbs from about a dozen semantic classes. In most of the clear cases, the ordering restrictions go in the direction predicted by Cinque's hierarchy. Here are some examples:

- (7) a. Acıkcası muhtemelen gel-me-yeceğ-im.
 frankly probably come-NEG-FUT-1sg
 'Frankly, I probably won't come.'
- b. *Muhtemelen acıkcası gel-me-yeceğ-im.
 probably frankly come-NEG-FUT-1sg
 'Probably I frankly won't come.'
- (8) a. Her zaman iyi yaz-ar.
 always good write-AOR.3sg
 'He always writes well.'

- b. *Iyi her zaman yaz-ar.
 Good always write-AOR.3sg
 'He well always writes.'

These ordering restrictions equally make sense in terms of the meanings of the adverbs involved. *Acıkkası* 'frankly' is an illocutionary adverb and logically takes scope over *muhtemelen* 'probably': the speaker is being frank in saying that she will probably not come; she is not probably saying that frankly she won't come. Similarly in (8), writing well is what he always does, it is not that he is good at "always-writing".

In other cases, both scope relations seem logically possible, and correspondingly both adverb orderings are possible:

- (9) a. Ahmet şimdi akıllıca teslim ol-du.
 Ahmet now wisely surrender be-PAST.3sg
 'Ahmet has now wisely surrendered.'
- b. Ahmet akıllıca şimdi teslim ol-du.
 Ahmet wisely now surrender be-PAST.3sg
 'Ahmet has wisely now surrendered.'

These kinds of pairs are difficult to reconcile with Cinque's hierarchy, where subject-oriented adverbs such as *akıllıca* 'wisely' are supposed to occur below temporal adverbs anchored to speech time. In these kinds of cases, the adverbs seem to modify the verb "on different planes," so it makes little or no difference in which order they apply.

But the most interesting cases are those where order does matter:

- (10) a. Ders-e gel-diğ-imiz-de, Can {her zaman/genelde}
 class-DAT come-NOM-1pl-LOC Can {always/usually}
 zaten ora-da-dır.
 already there-LOC-3sg
 'When we get to class, Can is {always/usually} already there.'
- b. ??Ders-e gel-diğ-imiz-de, Can zaten {her zaman/genelde} ora-da-dır.
- (11) a. Can zaten {her zaman/genelde} ders-e gel-ir.
 Can already {always/usually} class-DAT come-AOR.3sg
 'Can already {always/usually} comes to class.'
 (e.g. so we don't need to remind him to attend)
- b. ??Can {her zaman/genelde} zaten ders-e gel-ir.

- (15) Ahmet dün oku-yor-du.
 Ahmet yesterday read-PROG-PAST.3sg
 ‘Ahmet was reading yesterday.’

Sometimes an auxiliary *ol-* ‘be’ needs to be inserted, because only the past *-DI* and *-miş* in its evidential sense can attach directly to already-suffixed verbs:

- (16) a. Cüneyt yarın oku-yor ol-acak.
 Cüneyt tomorrow read-PROG be-FUT.3sg
 ‘Tomorrow Cüneyt will be reading.’
 b. *Cüneyt yarın oku-yor-acak.

The abilitative *-(y)Abil* is quite differently morphologically to the other six suffixes in (14), since it does not by itself derive a well-formed word, so forms in *-(y)Abil* always requires further suffixation.

- (17) a. Deniz gel-ebil-ecek.
 Deniz come-ABIL-FUT.3sg
 ‘Deniz will be able to come.’
 b. *Deniz gel-ebil.

We examined all possible pairings of suffixes to see what orderings are acceptable. Most often, only one of the two orders is possible. For instance, the following permutation of (15) is completely ungrammatical:

- (18) *Ahmet dün oku-du-yor.
 Ahmet yesterday read-PAST-PROG.3sg
 ‘Ahmet is having read yesterday.’

This case conforms to Cinque’s hierarchy, where Past is much higher than Progressive. Many other pairs are also found only in the order predicted by Cinque.

However, there are also some telling exceptions. The future and the aorist suffixes can occur in either order:

- (19) Saat iki-de Can genelde yi-yecek ol-ur.
 hour two-LOC Can usually eat-FUT be-AOR.3sg
 ‘At two o’clock, Can is usually about to eat.’

- (20) On sene sonra hala bu lokanta-ya gid-er ol-acak.
 ten year after still this restaurant-DAT go-AOR be-FUT.3sg
 ‘In ten years, he will still be going to this restaurant.’

Once again there is a clear difference in meaning which follows straightforwardly from the outer suffix taking scope over the inner one. In Cinque’s hierarchy, Future takes scope over Habitual (where the aorist must be placed), so (19) is unexpected. One entirely reasonable possibility would be to say that *-(y)AcAk* in (19) fills the Proximative head, which is lower than Habitual. But again, having more than one position for each morpheme, depending on the scope it needs to receive, does not appear to be very explanatory. Under this account, it would be an accident that the morpheme which fills the Proximative head in (19) and the morpheme which fills the Future head in (20) have exactly the same form, i.e. *-(y)AcAk*. However, if we allow semantic scope to determine order, then the same future tense morpheme is involved in both sentences, only its position relative to the aorist varies according to the interpretation.

Some interesting issues arise with the abilitative suffix *-(y)Abil*. It has two distinct senses: ability and possibility. In its ‘ability’ sense, it scopes under all the tense/aspect suffixes. This can be seen in (17a) above, as well as in the following example:

- (21) Ahmet gel-ebil-di.
 Ahmet come-ABIL-PAST.3sg
 ‘Ahmet was able to come.’

The ‘possibility’ sense is only possible when *-(y)Abil* is followed by the aorist, in which case the aorist loses its habitual interpretation (see Savaşır 1986):

- (22) a. Ahmet gel-miş ol-abil-ir.
 Ahmet come-ANT be-POSS-AOR.3sg
 ‘Ahmet might have come.’
 b. *Ahmet gel-miş ol-ur.
 Ahmet come-ANT be-AOR.3sg
 ‘Ahmet has come.’

The ungrammaticality of (22b) demonstrates that the aorist generally has to be interpreted as habitual in this context. The fact that a present perfect interpretation is possible in (22a) shows that the aorist loses its habitual force when it follows *-(y)Abil*.

In its ‘possibility’ sense, *-(y)Abil* appears inside the past suffix (23) but outside the future suffix (24):

- (23) a. Abla-m şarkı söylü-yor ol-abil-ir-di.
 sister-1sg song sing-PROG be-POSS-AOR-PAST.3sg
 ‘My sister might have been singing songs.’
- b. *Abla-m şarkı söylü-yor-du ol-abil-ir.
 sister-1sg song sing-PROG-PAST be-POSS-AOR.3sg
 ‘My sister might have been singing songs.’
- (24) a. Ahmet gel-ecek ol-abil-ir.
 Ahmet come-FUT be-POSS-AOR.3sg
 ‘Ahmet might come.’
- b. *Ahmet gel-ebil-ir ol-acak.²
 Ahmet come-POSS-AOR be-FUT.3sg
 ‘Ahmet might come.’

This is problematic for Cinque’s hierarchy, where Past immediately dominates Future. There are potential sites for epistemic modals both above and below Past and Future, but not in between. Interestingly, the past suffix does take logical scope over the possibility modal suffix in (23), as expected on the basis of the surface order: the implication is that the doubt took place in the past. For instance, the speaker could be reporting a situation in which she was standing outside her sister’s door, wondering if it was her sister singing inside. But for doubt in the present, an adverb must be used:

- (25) Abla-m belki şarkı söyl-üyor-du.
 sister-1sg maybe song sing-PROG-PAST.3sg
 ‘Maybe my sister was singing songs.’

A still more complex case is the following:

- (26) Gel-e-me-yebil-ecek.³
 come-ABIL-NEG-ABIL-FUT.3sg
 ‘She will in the future be able to be unable to come.’

The abilitative equivalent in the negative is $-(y)A$, realized as $-e$ in this case. Both abilitatives must be in the sense of ability, not possibility, because there is no aorist suffix. This sentence requires a very particular kind of context. An example would be if there were a tedious meeting which she will be obliged to attend, such that making herself unable to attend would be something she would plausibly strive for. The sentence is interesting because the very fact that two abilitative suffixes are possible suggests that there cannot be a single head which hosts this kind of root modal.

6 Morphological Restrictions

Besides semantic scope, sometimes certain orders are ruled out for morphological reasons which appear to be somewhat idiosyncratic. There is no reason why future should be unable to take scope over obligation, yet the following sentence is ungrammatical:

- (27) *Ahmet gel-meli ol-acak.
Ahmet come-OBLIG be-FUT.3sg
'Ahmet will have to come.'

The semantic plausibility is confirmed by the following paraphrase using nominalization, which is perfectly grammatical:

- (28) Ahmet-in gel-me-si gerek-ecek.
Ahmet-GEN come-NOM-3sg necessary-FUT.3sg
'Ahmet's coming will be necessary (i.e. Ahmet will have to come).'

The ungrammaticality of (27) appears to come down to the "boring" fact that forms in *-mAlI* cannot appear as complements of the verb *olmak* 'to be'.

The placement of the question marker *-mI* in Turkish may be another example of a language-particular morphological fact overriding any universal ordering principles. In simple sentences, it occurs after the TAM suffix:

- (29) Bil-iyor-mu-sun?
know-PROG-QST-2sg
'Do you know?'

But if there are two TAM suffixes, the question marker falls in between them:

- (30) Can gel-ecek-mi-y-di?
Can come-FUT-QST-AUX-PAST
'Was Can going to come?'

It is unclear what scope a question particle should logically have with respect to TAM categories. In Korean, according to Cinque (1999: 53), question particles occur in the very outermost position, presumably filling the Mood_{speech act} head. As far as we are aware, the Turkish ordering exemplified in (30) is quite unusual.

We do not want to claim that an account in terms of semantic scope can predict the position of the question particle in Turkish. Rather, it seems to be a language-particular morphological fact about *-mI* that it attaches to the innermost TAM suffix.

7 Conclusions

We have argued in this paper that the ordering of adverbs and functional heads in Turkish is determined primarily by semantic scope. A universal hierarchy of functional projections (Cinque 1999) appears to be too restrictive to account for the data, at least without unmotivated duplication of functional heads. Our discussion has been quite informal, but the data do serve to suggest that a substantive theory of the possible relative semantic scopes of adverbs and functional morphemes is going to be a crucial ingredient in an account of the surface orders in which these elements are found cross-linguistically.

Notes

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1 Examples are in Turkish orthography. Capital letters in forms of morphemes indicate alternating segments. The following abbreviations are used in the glosses: ABIL abilitative; ACC accusative; ANT anterior; AOR aorist; AUX auxiliary; DAT dative; FUT future; GEN genitive; LOC locative; NEG negative; NOM nominalizer; OBLIG obligation; PAST past; pl plural; POSS possibility; PROG progressive; QST question; sg singular.

2 This sentence is grammatical, with a different meaning, if *-(y)Abil* is interpreted in its abilitative sense. Note also that (17a), in which the abilitative and future are stacked directly, is grammatical too.

3 This sentence (word!) comes from Cinque (1999: 198), though the gloss and translation do not. Cinque has the sentence glossed as if *-(y)Abil* is in its 'possibility' sense, which, as discussed in the text, is not a possible interpretation.

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