

A unifying analysis of Turkish relative clause

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Abstract

We propose a new analysis that unifies different relative clause constructions of Turkish for subject and object relativization. In our new analysis, we treat different participle morphemes as derivation suffixes generating noun phrases from stemmed verb phrases. This view places the whole relativization process under a noun phrase construction. By this, we also explain away the subject/non-subject asymmetry of Turkish relative clause.

1 Introduction

Turkish relative clause (RC) has generally been treated in a gapping and movement context (Kornfilt, 1997, p. 57). In this view, relative clauses are constructed by transforming a finite clause and changing its semantic content to one of an adjective phrase. This view results in a range of complex and distinct rules to explain its construction for different cases of relativization targets. Moreover, these rules stand in contrast to the rest of the Turkish grammar, which has a rather regular morphosyntactic structure. Two of the earliest attempts to analyze the syntax of relativization in Turkish were (Underhill, 1972) and (Hankamer and Knecht, 1976) which gave exhaustive lists of ways in which RCs are constructed. These early accounts do not provide a unified view of the different relativization and participle selection processes.

(Güngördü and Engdahl, 1998) gives a HPSG account of the relativization in Turkish using lexically modified MOD values, valency lists and non-local feature handling. An analysis of RCs within the framework of Minimalist Program is proposed in (İlhan Merih Çağrı, 2005). More recently, (Öner Özçelik, 2016) gives an antisymmetric analysis of relative clauses.

In this paper, we explain the relativization in Turkish by viewing participle morphemes as derivations acting on stemmed verb phrases where the finite verb is stripped of its tense and person morphemes. We claim that the apparent asymmetry of relativizations with respect to subject and object corresponds to two different strategies of deriving noun phrases.

A claim similar to our present proposal was forwarded in (Kornfilt, 2008) for the case of relativized object.

The rest of the paper is organized as follows. In the next section, we give a short description of subject and object relativization in Turkish. In Section 3, we highlight the problems of the traditional view in the case of relativization out of constituent. In section 4, we present our proposal for the analysis of Turkish relative clauses. We end the paper with some concluding remarks.

2 Relative Clauses in Turkish

Turkish is a head final language with a prevalent SOV word order where scrambling is also licensed. Turkish also has a rich morphology where the syntactic functions are usually marked with case suffixes. The most prevalent view of relative clause in Turkish is to invoke a relativization process which moves and gaps the constituents of a sentence that contain no relative structures and to arrive at a relative clause. The relativized constituent is referred to as the target of relativization. The example sentences (1) and (2) illustrate the transformation.

- (1) Adam-lar su iç-iyor-lar.
 Man-PL water drink-IMPF-3PL
 Men are drinking water.

In order to relativize the target subject “adam-lar” (men) in (1), we move it to immediately after the verb and the verb is modified with one of the participle morphemes -(y)An, -DIk, -(y)AcAk. In the example (1), the subject is the target of relativization and so the sentence is relativized using -(y)An as in (2).

- (2) su iç-en adam-lar.
 water drink-PART man-PL
 the men who are drinking water.

In this relativization process, apart from the constituent movement, a single participle morpheme -(y)An replaces both the tense and person morphemes of the verb. In the traditional view of the Turkish relative clause, the -(y)An morpheme derives an adjective from a verb stem.

If the target of relativization is a direct object of the verb, -DIk participle suffix is used. In this case, a GEN-POSS structure is used as well as the movement. The sentence (3) is the object-relativized transformation of the sentence in (1), where, this time, the target of relativization is the indefinite object “su” (water).

- (3) adam-lar-ın iç-tiğ-i su
 man-PL-GEN drink-PART-P3SG water
 the water that the men are drinking

Note that, in object relativization, a genitive morpheme is appended to the subject of the original phrase, “adam-lar” (men) in this case.

The most frequent occurrences of relativization involves the two cases where the target of relativization is the subject or object of the verb.

3 Relativizing within a constituent

In the transformation view, construction of relative clauses are further parameterized by how the target of relativization functions within its surrounding constituent. A particularly common case is when the possessor of a subject possessive NP is the target. This process is illustrated in sentences (4) and (5).

- (4) Kız-ın kalem-i düş-tü
 Girl-GEN pencil-P3SG fall-PAST-A3SG
 Girl’s pencil fell.

In the original sentence (4), when moving to after the verb “düş-tü”, the possessor “kız-ın” loses its genitive morpheme while the possessed constituent retains its possessive morpheme -I.

- (5) kalem-i düş-en kız
 pencil-P3SG fall-PART girl
 the girl whose pencil fell

Moreover, the person agreement within the NP is lost when its possessor is relativized out of the NP. For example, in sentences (6) and (7), the possessed “baba-sı” retains its third person marking while its relativized possessors become “sen” (you) and “ben” (me), respectively.

- (6) baba-sı gel-en sen
 father-P3SG come-PART you
 you, whose father came
 (cf. sen-in baba-n gel-di)
 your father came

- (7) baba-sı gel-en ben
 father-P3SG come-PART me
 I, whose father came
 (cf. ben-im baba-n gel-di)
 my father came

Another interesting case is when the target of relativization is a case-marked oblique object of the verb. In such cases, as in the possessive NP, the case marking of the target drops when it moves to after the verb. Moreover, possessive markers are inserted after the participle. In the following example, the dative case marker -DA drops and possessive marker -(I)m is inserted after the participle. Sentence (8) illustrates this case.

- (8) uyu-duğ-um yatak
 sleep-PART-P1SG bed
 the bed that I sleep in
 (cf. yatak-ta uy-uyor-um)
 bed-DAT sleep-IMPF-1SG

4 A new analysis of relative clause

In order to unify the disparate relative clause constructions of Turkish exemplified in the previous section, we make the following two claims.

1. There are no participles in Turkish. All participles should be treated as suffixes deriving noun phrases out of stemmed verb phrases.
2. There are no relative clauses in Turkish. All relative clauses can be treated as noun phrases.

In the rest of this section, we justify these claims.

4.1 -An morpheme

The participle suffix -An, when appended to single verb stems, derives an adjective with the semantics of actor, similar to the -er suffix in English. Examples of this derivation are, gel-en (comer), otur-an (sitter), sor-an (asker).

In Turkish, the boundary between adjectives and nouns are not clear cut. Any adjective can syntactically stand for a noun and conversely many nouns can serve as adjectives before other nouns. The latter is more common in idiomatic constructions. For example, the qualified noun “adam” in the subject of the sentence (9) is dropped in (10) and the adjective “rich” serves as the subject.

- (9) zengin adam konuş-ur
 rich man speak-AOR-3SG
 the rich man speaks
- (10) zengin konuş-ur
 rich speak-AOR-3SG
 the rich one speaks

For nouns serving as adjectives, examples are “parmak çocuk” (finger kid), “ressam adam” (painter man), “ada ülke” (island country).

In this paper, we propose to treat the adjectival participle -An as a derivational suffix modifying a VP with its verb stemmed. It produces a NP out of a stemmed VP. The NP thus produced can stand on its own or serve as an adjective before a common noun.

As an example, consider the phrase in (11).

- (11) ev-de kal-an çocuk
 house-DAT stay-PART child

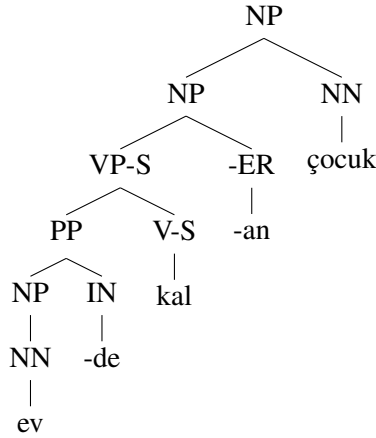


Figure 1: The parse of “ev-de kal-an çocuk” with the new tags VP-S, V-S and -ER.

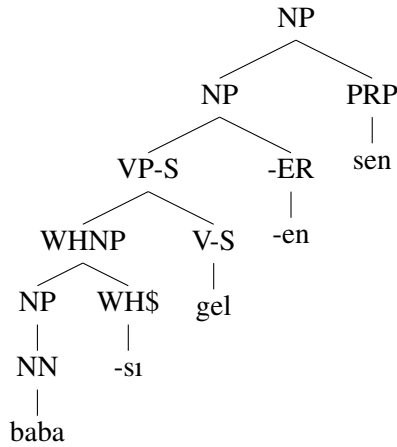


Figure 2: The parse tree of “babası gelen sen”.

the child who stays (stayed) home

Figure 1 illustrates the new structure in the parse tree of the sentence (11). In Figure 1, we use several new tags that help us with the new analysis of the -An participle. They are

V-S: verb stem,

VP-S: verb phrase with its verb stemmed,

-ER: adjectival suffix (-yAn)) that attaches to VP stems.

In order to consistently parse the sentences like (5),(6) and (7), we break the long distance dependency between the -P3SG morpheme and the noun that the RC qualifies. Instead, we treat -P3SG as completely contained within its surrounding clause. Thus, -P3SG here generically marks a possessed noun whose possessor left indeterminate. Such a view, immediately explains the case of headless RC’s (Kornfilt, 1997).

In order to emphasize the lack of person agreement in the possessive marker, we use -WP\$ as its tag.

This also accords with its counterpart in English which tags the possessive relative pronoun “whose.”

Using the analysis that we propose with the new set of tags, the parse of the sentence (7) is given in Figure 2.

4.2 -DIk and -AcAk morphemes

There are plenty of examples to suggest that words derived from verb stems using -DIk morpheme behave like nouns in contexts other than relative clauses. An example sentence is (12). In the analysis of the sentence, (12), we intentionally used -DIk morpheme instead of the -PART as done in traditional analysis.

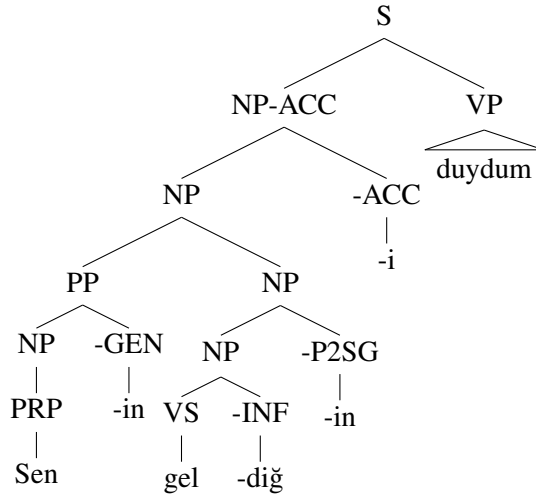


Figure 3: The parse tree of “Senin geldiğini duydum”.

- (12) biz-e ye-dik-ler-in-i iç-tik-ler-in-i söyle
 us-DAT eat-DIK-PL-P2SG-ACC drink-DIK-PLU-P2SG-ACC tell
 tell us what you ate and drank

In this paper, we look for a unifying analysis that treats -DIK as a noun generating morpheme even in RC contexts. Indeed, such an analysis is supported by the presence of possessive morpheme after -DIK and the attachment of genitive morpheme to the subject of the RC as in (13).

- (13) sen-in gel-diğ-in-i duy-du-m
 you-GEN come-DIK-P2SG-ACC
 I heard you came.

Thus, the words derived by the -DIK morpheme obey the noun inflection paradigm.

For (13), an alternate yet a more literal translation would be “I heard your coming.” Thus, -DIK roughly corresponds to -ing gerundive form for verbs in English. For the present analysis, we will use -INF tag to denote the -DIK morpheme. This puts -DIK morpheme in the same lexical category as the infinitive morpheme -mA as in gel-me-si (his coming). The difference between -DIK and -mA is one of a semantics. While -DIK denotes a past or present action, -mA denotes an action without a specific time. Similarly, -AcAk morpheme specifies the infinitive form of an action in the future.

The parse tree for the sentence (13) is given in Figure 3.

A particular difficulty in the transformational view of relative clauses is the insertion of auxiliary “ol-” (be) in relativizing nominal sentences. For example, in relativizing the sentence (14), we are forced to insert the verb ol- as in (15).

- (14) Ali sen-in öğretmen-in.
 Ali you-GEN teacher-P2SG.
 Ali is your teacher.
- (15) Sen-in öğretmen-in ol-an Ali
 you-GEN teacher-P2SG be-PART Ali
 Ali who is your teacher.

Such an insertion is impossible to arrive at by any movement and gapping of the original sentence (14) even when we imagine a dropped copula at the end as “Ali senin öğretmenin-dir”. However, in our new analysis of the relative clause, we decouple (14) and (15) and treat them as having different syntaxes albeit with similar semantics. The parse trees of the sentences (14) and (15) are given in Figure 4.

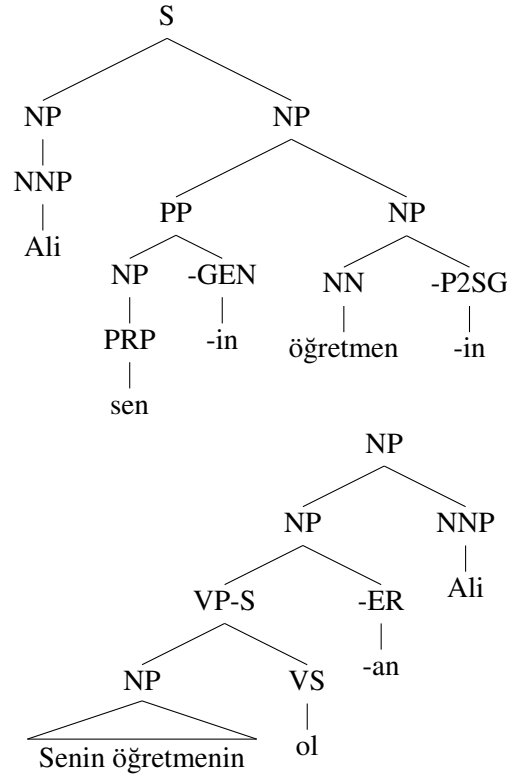


Figure 4: The parse trees of the sentences “Ali senin öğretmenin” and “senin öğretmenin olan Ali”.

5 Conclusion

Relative clauses in Turkish are tricky structures. Up to now, their syntactic structures have not been analyzed under a consistent framework. In this paper, we proposed to resolve the inconsistency by claiming that there are actually no relative clauses in Turkish. Such structures are not sentential clauses but rather noun phrases. As for the morphemes -An, DIk and -AcAk, traditionally viewed as participles used in relativization, we proposed a new view that treats them as productive suffixes deriving NP’s out of verb phrase stems. The resulting view results in consistent parses for (traditional) relative clauses. Moreover, our new analysis easily explains the insertion of genitive morphemes and auxiliary verbs in relativization.

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