

## TURKISH ATB RELATIVIZATION: IMPLICATIONS ON RELATIVE CLAUSE FORMATION

SEMRA BATURAY MERAL AND HASAN MESUT MERAL\*

*Yıldız Technical University, Istanbul*

*\*hmeral@yildiz.edu.tr*

### ABSTRACT

This paper discusses Turkish across-the-board relativization in relation to the two relative clause formation strategies: (i) the empty operator movement analysis of Chomsky (1977), and (ii) the head raising analysis of Kayne (1994). It shows that the across-the-board relative clauses where the head noun is interpreted inside both conjuncts present evidence against the head raising analysis of Turkish relative clauses *a la* Kayne (1994) due to the fact that ATB relativization does not require that the gaps be in positions requiring the same case. The operator movement analysis of Chomsky (1977), on the other hand, base generates the head noun and renders it free from the case features inside the conjuncts.

KEYWORDS: Across-the-board; relative clauses; case mismatch; head raising; empty operator movement.

### 1. Introduction<sup>1</sup>

Ever since Ross (1967: 107) defined the across-the-board (henceforth ATB) movement as an operation “which moves a constituent out of all conjuncts of a coordinate structure”, various properties of these constructions have been discussed in Generative literature. Discussions on the ATB movement in wh-movement constructions have been extended into the other A'- contexts involving topicalization, relativization, scrambling, and a number of A-move-

---

<sup>1</sup> We would like to thank the two anonymous reviewers for their helpful suggestions and critical remarks. Usual disclaimers apply.

ment contexts such as passivization and raising.<sup>2</sup> An example of ATB relativization is given in (1).

- (1) The book that [<sub>Conj.1</sub> John likes \_ ] and [<sub>Conj.2</sub> Mary hates \_ ]

(1) above involves a NP *the book* which is interpreted as the complement of the verbs in both conjuncts. Similar structures are also found in Turkish where a single head noun is interpreted inside the two conjuncts *Ahmet hates* and *Ali loves*. Consider (2).<sup>3</sup>

- (2)<sup>4</sup> [<sub>Conj.1</sub> Ahmet-in **ec**-ABL<sub>i</sub> nefret et-tiğ-i] [<sub>Conj.2</sub> Ali-nin **ec**-ACC<sub>i</sub>  
 Ahmet-GEN hate-REL-3SG Ali-GEN  
 sev-diğ-i] kadın<sub>i</sub>  
 love-REL-3SG woman  
 ‘The woman<sub>i</sub> that Ahmet hates *ec*<sub>i</sub> and Ali loves *ec*<sub>i</sub>.’

In (2) gaps in the complement positions of the verbs in both conjuncts are interpreted with the head noun *kadın* ‘woman’. Note that a single item, the head noun which is interpreted in both conjuncts, has different case requirements: ablative in the first conjunct but accusative in the second. This “case mismatch” is also observed in complex relative clauses where the shared el-

<sup>2</sup> See de Vries (to appear) for the complete list of structures involving ATB movement.

<sup>3</sup> Following abbreviations are used in the article: ABL: Ablative, ACC: Accusative, Adj. Cl. Adjunct clause, Conj.: Conjunct, DAT: Dative, *ec*: empty category left behind movement, GEN: Genitive, OP: Operator, REL: Relativizer, Rel. Cl.: Relative clause, SG: Singular.

<sup>4</sup> Relative clauses in Turkish are prenominal modifiers of the head nouns, where the verb is a non-finite form that is relativized via two suffixes, *-(y)An* and *-DIK*, which correspond to the subject and non-subject relativization respectively. In the former case there is no agreement marker on the verb while in the latter, a possessive agreement suffix indicating the genitive marked subject of the relative clause appears on the verb (Underhill 1972; Hankamer and Knecht 1976; Haig 1997; Çağrı 2005; Ulutaş 2006; Öztürk 2008 among others).

(ia) *Subject Relativization*: [CP[TP **ec**<sub>i</sub> [vP ... verb-(y)An ] ] ] NP<sub>i</sub>

[Rel. Cl. **ec**<sub>i</sub> koş-an] adam<sub>i</sub>  
 run-REL man

‘The man who is running.’

(ib) *Non-subject Relativization*: [CP[TP subject<sub>k</sub> [vP ... **ec**<sub>i</sub> ... verb-DIK-Agr<sub>k</sub> ] ] ] NP<sub>i</sub>

[Rel. Cl. Ben-im<sub>k</sub> **ec**<sub>i</sub> gör-düğ-üm<sub>k</sub>] adam<sub>i</sub>  
 I- GEN see-REL-POSS1SG man

‘The man that I saw.’

ement is interpreted in the complement positions of the verbs in adjunct clauses which are embedded under relative clauses as exemplified in (3).

- (3) [Conj.1 Ahmet-in [Adj.Cl. **ec**-ABL<sub>i</sub> nefret et-tiğ-in-den] **ec**<sub>i</sub> kov-duğ-u]  
           Ahmet-GEN                               because.hate-3SG-ABL   fire-REL-3SG  
       [Conj.2 Ali-nin [Adj.Cl. **ec**-ACC<sub>i</sub> sev-diğ-in-den] **ec**<sub>i</sub>  
           Ali-GEN                               because.love-3SG-ABL  
       kolla-diğ-ı]               kadın<sub>i</sub>  
       protect-REL-3SG woman  
       ‘The woman<sub>i</sub> that Ahmet fired *e<sub>i</sub>* because he hates *e<sub>i</sub>* and Ali protects  
       *e<sub>i</sub>* because he loves *ec<sub>i</sub>*.’

In both conjuncts of (3), the shared material *kadın* ‘woman’ is interpreted inside the complement positions of the verbs in adjunct clauses. It is also interpreted as the complement positions of the intermediate verb in each conjunct, *kov-* ‘fire’ in Conjunct 1 and *kolla-* ‘protect’ in Conjunct 2. Note that the structure is grammatical despite the “case mismatch” i.e. the shared constituent requires the ablative case in the first conjunct and the accusative case in the second.

The interesting point observed in these examples is related to the fact that the positions inside the conjuncts are not required to be the same in terms of case, i.e. relativization can target a position with the accusative case in one conjunct but the ablative in the other. In the rest of the paper, we discuss the implications of this fact on the analyses of relative clause formation in Turkish.<sup>5, 6</sup>

<sup>5</sup> As one of the reviewers points out, a more interesting point regarding to the data we present is that the head noun of a relative clause construction never overtly shows the case required by the position of the gap, but gets its overt case from the matrix syntactic environment. We take this fact as suggesting that the head noun is more likely to be base generated as a part of the matrix clause, not originated inside the relative clause. However, the issue can also be discussed in relation to the differences between non-finite relativized verbs as an instance of nominalization and fully finite matrix verbs in terms of case checking domains. We leave the issue for further investigation.

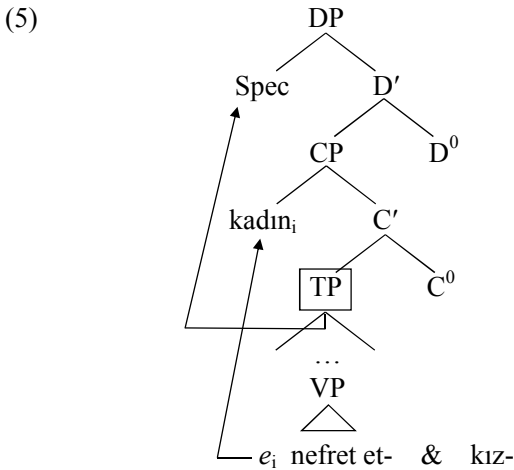
<sup>6</sup> The nature of the moved constituent in relative clauses has been a debated issue in the Turkish literature. Following Chomsky’s (1977) analysis, Özsoy (1996), Meral (2010) argue that the moved constituent in relative clauses is an empty operator which moves from a position inside the IP to the Spec-CP. Following Kayne’s (1994) head raising analysis, on the other hand, Kornfilt (2000) and Gökgöz (2014) argue that the moved constituent in relative clauses can be the head noun. See Kornfilt (2000) for a detailed discussion of both strategies of relative clauses on Turkish data.

## 2. Turkish ATB relativization and relative clause formation

As we have noted above, Turkish ATB relativization does not require positions inside the conjuncts be the same in terms of case. What does this imply for an analysis of relative clause formation which argues that the head noun is originated inside the relative clause and raises to Spec-CP? Consider (4) which exemplifies an ATB relativization.

- (4)  $[_{DP} [_{TP} \text{ Ben-im } ec_i \text{ nefret et-tiğ-im} ] [_{TP} \text{ sen-in } ec_i \text{ kız-dığ-ın} ]_k$   
           that.I.hate *ec*-ABL                                   that.you.are.angry.at *ec*-DAT  
 $[D^0 [_{CP} [_{NP} \text{ kadın}_i] [C' ec_k]] ] ]$   
           woman  
 ‘The woman that I hate and you are angry at.’

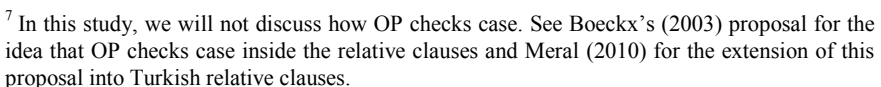
According to the head raising analysis, (4) involves two steps of movement: (i) the head noun moves from the complement position of the relativized verbs into the Spec-CP position, and (ii) the whole TP moves into the Spec-DP position in order to yield prenominal modification (Kornfilt 2000). The relevant tree representation is given in (5) below.



The problem with (5) is that the head noun originates inside the relative clause conjuncts, i.e. a single item *kadın* ‘woman’ merges with the two verbs with different case requirements. This means that the shared element in an ATB relativization checks ablative case in the first conjunct, but dative case

According to the empty operator movement analysis, an empty operator which is merged in the relativized position moves to the Spec-CP in relative clauses. The head noun which is interpreted inside both conjuncts is base generated in its surface position and gets its case from the matrix clause (6).

- According to the operator movement analysis, an empty operator merges with the verbs inside the conjuncts and satisfies the case requirements of both verbs simultaneously.<sup>7</sup> Then, OP moves to the Spec-CP position. Following Aoun and Li (2003) who states that the operator moves to the Spec-CP position in order to take the whole clause under its scope, we assume that OP moves to the Spec-CP position in order to check some feature on the C head. The representation of (6) is given in (7) below.



We propose that the grammaticality of “case mismatch” follows from the idea that case requirements of the head noun are satisfied not inside the relative clause but in the matrix clause. Since what moves is not the head noun itself but an empty operator, it is not surprising that the positions inside the conjuncts are not required to be the same in terms of morphological case.

A question that naturally follows from the discussion above is what if a resumptive pronoun appears in the position of the gap inside the conjuncts? Since the resumptive pronoun which is interpreted with the head noun in a relative clause has case requirements, its behavior in ATB relativization becomes crucial for the discussion here. If ATB relativization favors the empty operator movement analysis, resumptive copies of the head noun inside the conjuncts are predicted to be ungrammatical. The example in (8) below shows that this prediction is borne out.

- (8) \*<sub>[Conj.1]</sub> Ahmet-in      **kendisin-den<sub>i</sub>**    nefret et-tiğ-i]  
          Ahmet-GEN   herself-ABL    hate-REL-3SG  
       <sub>[Conj.2]</sub> Ali-nin      **kendisin-i<sub>i</sub>**    sev-diğ-i]      kadın<sub>i</sub>  
          Ali-GEN    herself-ACC    love-REL-3SG   woman  
       ‘\*The woman<sub>i</sub> that Ahmet hates *her<sub>i</sub>* and Ali loves *her<sub>i</sub>*.’

The example in (8) above is ungrammatical if the head noun *kadın* ‘woman’ is interpreted inside both conjuncts, i.e. there is one single woman that Ahmet hates and Ali loves. This indicates that head noun is not originated inside the relative clause where it undergoes case checking operation. Now, let us consider a further example where a resumptive pronoun appears only in the first conjunct but not in the second.

- (9) <sub>[Conj.1]</sub> Ahmet-in      **kendisin-den<sub>i</sub>**    nefret et-tiğ-i]  
          Ahmet-GEN   herself-ABL    hate-REL-3SG  
       <sub>[Conj.2]</sub> Ali-nin **ec-ACC<sub>i</sub>**    sev-diğ-i]      kadın<sub>i</sub>  
          Ali-GEN                    love-REL-3SG    woman  
       ‘\*The woman<sub>i</sub> that Ahmet hates *her<sub>i</sub>* and Ali loves *ec<sub>i</sub>*.’

The example where an optional resumptive pronoun appears in the first conjunct but not in the second is grammatical. The grammaticality of this example further shows that the head noun is not originated inside the conjuncts. If

it were, the example should be ungrammatical due to “case mismatch” problem.<sup>8</sup>

### 3. Conclusion

The paper concludes that Turkish ATB relativization presents evidence against the head raising analysis of relative clause formation given that the positions inside the conjuncts are not required to be the same in terms of case. The grammaticality of such cases speaks for an analysis where the head noun is base generated in its position where it gets its case from the matrix syntactic environment.

## REFERENCES

- Aoun, J. and Y-H.A. Li. 2003. *Essays on representational and derivational nature of grammar: The diversity of wh-constructions*. Cambridge, MA: MIT Press.
- Boeckx, C. 2003. *Islands and chains: Resumption as stranding*. Amsterdam and Philadelphia: John Benjamins.
- Chomsky, N. 1977. “On wh-Movement”. In: Culicover, P., T. Wasow and A. Akmajian (eds.), *Formal syntax*. New York: Academic Press. 71–132.
- Çağrı, I. 2005. Minimality and Turkish relative clauses. (PhD dissertation, University of Maryland.)
- Gökgöz, K. 2014. “What looks like relative clause extraposition in Turkish does not seem to be rightward movement”. *Dilbilim Araştırmaları* [Journal of Linguistic Research] 2014(2): *A Festschrift for A. Sumru Özsoy*. Istanbul: Boğaziçi University Press. 55–67.
- Haig, G. 1997. “Turkish relative clauses: A tale of two participles”. *Turkic Languages* 1. 184–209. Wiesbaden: Harrassowitz Verlag.
- Hankamer, J. and L. Knecht. 1976. “The role of the subject/non-subject distinction in determining the choice of relative clause participle in Turkish”. *NELS* 4. 123–135.
- Kayne, R. 1994. *The antisymmetry of syntax*. Cambridge, MA: MIT Press.
- Kornfilt, J. 2000. “Locating relative agreement in Turkish and Turkic”. In: Göksel, A. and C. Kerslake (eds.), *Studies on Turkish and Turkic languages*. Wiesbaden: Harrassowitz. 189–196.

---

<sup>8</sup> Resumptive pronoun + gap combinations in ATB relativization needs a detailed examination in terms of their derivation, which is beyond the scope of this paper. See Zaenen et. al. (1981), Salzmann (2012) among others for syntactic accounts of the issue.

- Meral, H.M. 2010. Resumption, A'-chains and implications on clausal architecture. (PhD dissertation, Boğaziçi University.)
- Özsoy, A.S. 1996. "A'-Dependencies in Turkish". In: Rona, B. (ed.), *Current issues in Turkish linguistics*. Ankara: Hitit Yayınevi. 139–158.
- Öztürk, B. 2008. "Relativization strategies in Turkish". In: Boeckx, C. and S. Ulutaş (eds.), *MIT Working Papers in Linguistics, 4th Workshop in Altaic Formal Linguistics*. Cambridge, MA: Harvard University. 241–254.
- Ross, J.R. 1967. Constraints on variables in syntax. (PhD dissertation, MIT.)
- Salzmann, M. 2012. "Deriving reconstruction asymmetries in ATB-movement by means of asymmetric extraction + ellipsis". In: Ackema, P., R. Alcorn, C. Heycock, D. Jaspers, J. v. Craenenbroeck and G. Vanden Wyngaerd (eds.), *Comparative Germanic syntax: The state of the art*. Amsterdam and Philadelphia: John Benjamins. 353–386.
- Ulutaş, S. 2006. Verb movement and feature percolation: Evidence from Turkish relative clauses. (MA thesis, Boğaziçi University.)
- Underhill, R. 1972. "Turkish participles". *Linguistic Inquiry* 3. 87–99.
- de Vries, M. To appear. "Across-the-board phenomena". In: Everaert, M. and H. van Riemsdijk (eds.), *Blackwell companion to syntax* (2nd ed.). Oxford: Blackwell.
- Zaenen, A., E. Engdahl and J.M. Maling. 1981. "Resumptive pronouns can be syntactically bound". *Linguistic Inquiry* 12(4). 679–682.

**Address correspondence to:**

Hasan Mesut Meral  
 Turkish Language Teaching Department  
 Faculty of Education  
 Yıldız Technical University  
 Room A-117 Davutpaşa  
 Istanbul, 34210  
 Turkey  
 hmeral@yildiz.edu.tr