

# On the Interaction of Gapping and Head-movement in Turkish Coordination

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## 1 Introduction

In a line of work that originates with Kornfilt 1996, Kelepir 2001, and Zanon 2014 have argued that differences between Turkish verbal and non-verbal predicates can be derived via head movement to distinct heads in the clausal spine.

- |                                                                         |                                                                                                                                        |
|-------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| (1) [Verbal predicates]                                                 | (2) [Non-verbal predicates]                                                                                                            |
| a. Ali gel-di-Ø.<br>A. come-PAST-3SG<br>'Ali came.'                     | a. Bütün hafta hasta-y-di-m.<br>all week sick-COP-PAST-1SG<br>'I was sick all week.'                                                   |
| b. Yakala-n-di-m mi?<br>catch-PASS-PAST-1SG Q<br>'Was I caught?'        | b. Doktor mu-y-Ø-um.<br>doctor Q-COP-PRES-1SG<br>'Am I a doctor?'                                                                      |
| c. Öl-dür-ül-dü-ler.<br>die-CAUS-PASS-PAST-3PL<br>'They were murdered.' | c. Gazete-ler-de yaz-ıl-mış<br>'newspaper-PL-LOC write-PASS-PFV<br>i-di-Ø.<br>COP-PAST-3SG<br>'It had been written in the newspapers.' |

The two types exhibit different patterns with regard to:

- the placement of phonological stress (Kabak & Vogel, 2001),
- the presence of the copula *i-* (Kornfilt, 1996),
- the placement of the polar question marker (Kornfilt, 1996; Kahnemuyipour & Kornfilt, 2006; Kamali, 2011),
- the availability of suffixes scoping over conjuncts (Suspended Affixation) (Hankamer, 2008)

Previous work (Kelepir, 2001; Zanon, 2014) has argued based on these facts that finite verbal predicates involve head-movement to T, whereas non-verbal predicates — participial predicates, nominal, postpositional, and adjectival predicates — exhibit head-movement to Asp, and do not reach T.

In this work, I extend this proposal to some surprising and novel patterns involving the interaction of (roughly clause-sized) coordination and backward gapping. *A priori*, Kelepir's and Zanon's head movement proposal yields several possible underlying structures associated with the size of the coordinated phrases. Each possible configuration yields different predictions about restrictions on subject-verb agreement.

The core observation to be accounted for is that backward gapping of verbal predicates is degraded when subjects have different person features, while non-verbal predicates are more flexible.<sup>1</sup>

### Verbal predicates

(3) [Matching subject persons]

Ben dün akşam çay, bugün kahve iç-ti-m.  
 1SG yesterday evening tea CONJ today coffee drink-PAST-1SG  
 ‘I drank tea yesterday evening, and coffee today.’

(4) [Mismatching subject persons]

\*Ben dün akşam çay, Ali o sırada kahve iç-ti-Ø.  
 1SG yesterday evening tea CONJ Ali then coffee drink-PAST-3SG  
 ‘I drank tea yesterday evening, and Ali drank coffee then.’

[2.0/7 on the Likert scale]

### Non-verbal predicates

(5) [Matching subject persons]

Ben dün akşam çay, bugün kahve iç-miş-Ø-ti-m.  
 1SG yesterday evening tea CONJ today coffee drink-PFV-COP-PAST-1SG  
 ‘I drank tea yesterday evening, and coffee today.’

(6) [Mismatching subject persons]

?Ben dün akşam çay, siz o sırada kahve iç-miş-Ø-ti-niz.  
 1SG yesterday evening tea CONJ 2PL then coffee drink-PFV-COP-PAST-2PL  
 ‘I drank tea yesterday evening, and you coffee then.’

[3.6/7 on the Likert scale]

In this presentation, I will:

- review the arguments for the derivational distinction between verbal and non-verbal predicates (§2);
- zoom in on the interaction of coordination and backward gapping, presenting novel evidence from a pilot study (§3).
- argue that the size of the coordination in such configurations must be of different sizes for verbal and non-verbal predicates; further, the relevant patterns must be derived by backward gapping rather than Across-the-board head-movement (§4), contra Hankamer 1979.

## 2 Turkish Predicate Types

Verbal predicates:

- finite tenses: PAST & CONDITIONAL
- phonological stress is final
- never realize a copula overtly
- polar question marker attaches to the right edge of tense-agreement affixes

Non-verbal predicates:

- participial verbs & nominal, adjectival, or postpositional predicates

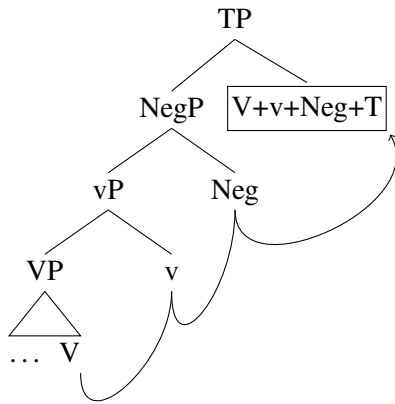
<sup>1</sup>Agreement in these paradigms is always with the subject of the second conjunct throughout. Agreement with the subject of the first conjunct is always ungrammatical.

- accept a wide variety of tenses: PRESENT, PAST, CONDITIONAL, & EVIDENTIAL
- contain more than one domain for stress assignment
- realize a copula overtly
- polar question marker is attached to the right edge of the predicate, before tense-agreement affixes

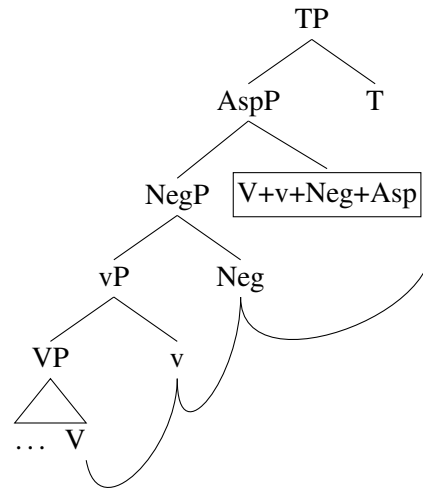
## 2.1 Structure of Turkish Predicates

In verbal predicates the proposal is that the verb head-moves to T, as in (7). The head-movement in non-verbal predicates terminates at Asp, not reaching T (Kelepir, 2001; Zanon, 2014), as in (8).

(7) Verbal Predicate Structure



(8) Participial Predicate Structure



## 2.2 Evidence for distinct head-movement landing sites

Verbal vs. non-verbal predicates have different morphosyntactic boundaries. Verbal predicates have the fully-inflected verb as the morphosyntactic domain — a complex T head — while the morphosyntactic domain targeted for stress assignment, etc. in non-verbal predicates is smaller, excluding tense and agreement morphology — a complex Asp head.

The empirical evidence below in favor of these boundaries makes sense if the result of head movement is mapped to a prosodic word domain (Kornfilt, 1996).

### 2.2.1 Phonological Stress

The stress assignment domain for verbal predicates is the fully-inflected verb, while the stress assignment domain for non-verbal verbs is the predicates excluding the copula, and tense and agreement morphology. Stress is assigned within this domain according to the general stress rules, with lexical stress and stress assigned by pre-stressing elements overriding default stress (Kabak & Vogel, 2001). In the lack of these exceptional stress mechanism, the default stress surfaces as final stress within the stress assignment domain.

Default stress marks the right edge of the stress assignment domain, so we can observe that the right edge of the stress assignment domain in verbal predicates includes the tense and agreement morphology, as in (9).

- (9) a. \*[yakalá]<sub>PrWd</sub> -di-niz                      b. \*[yakala-dí]<sub>PrWd</sub> -niz                      c. [yakala-di-níz]<sub>PrWd</sub>  
 catch-                      PAST-2PL                      catch-PAST                      -2PL                      catch-PAST-2PL  
 ‘You all caught it.’                      ‘You all caught it.’                      ‘You all caught it.’

By the same token, the default final stress highlights that the right edge of the stress assignment domain is between the predicate and the tense and agreement morphology for non-verbal predicates, as in (10) and (11).

- (10) [PP predicate]                      (11) [participial predicate]
- a. \*[Hastane-de i-dí-k]<sub>PrWd</sub>.  
 hospital-LOC COP-PAST-1PL  
 ‘We were in the hospital.’
- b. \*[Hastané]<sub>PrWd</sub>-de i-di-k.  
 hospital-LOC COP-PAST-1PL  
 ‘We were at the hospital.’
- c. [Hastane-dé]<sub>PrWd</sub> i-di-k.  
 hospital-LOC COP-PAST-1PL  
 ‘We were at the hospital.’
- a. \*[Çalış-tır-acak-Ø-tí-m]<sub>PrWd</sub>  
 work-CAUS-FUT-COP-PAST-1SG  
 ‘I was going to make him/her work.’
- b. \*[Çalış-tír]<sub>PrWd</sub> -acak-Ø-tı-m.  
 work-CAUS -FUT-COP-PAST-1SG  
 ‘I was going to make him/her work.’
- c. [Çalış-tır-acák]<sub>PrWd</sub> -Ø-tı-m.  
 work-CAUS-FUT -COP-PAST-1SG  
 ‘I was going to make him/her work.’

### 2.2.2 The Copula

The copula has two phonological realizations: cliticized to the predicate, as in (12-b) & (13-b), and phonologically separate, as in (12-a) & (13-a). When separate, the copula behaves as a separate phonological word, not extending vowel harmony, (12-a) & (13-a).

When it is a clitic, the copula is phonologically cliticized on the predicate in PF, and the copula is pronounced as a glide -y- following vowels, and phonologically null following consonants, as in (12-b) vs. (13-b).

- (12) [vowel-ending non-verbal predicate]                      (13) [consonant-ending non-verbal predicate]
- a. Hasta **i**-di-Ø.  
 sick COP-PAST-3SG  
 ‘S/he was sick.’
- b. Hasta-**y**-di-Ø.  
 sick-COP-PAST-3SG  
 ‘S/he was sick.’
- a. Doktor **i**-di-Ø.  
 doctor COP-PAST-3SG  
 ‘S/he was a doctor.’
- b. Doktor-Ø-**du**-Ø.  
 doctor-COP-PAST-3SG  
 ‘S/he was a doctor.’

The copula is never found in verbal predicates, so verbal predicates do not exhibit a smaller phonological word w.r.t. stress or vowel harmony.

- (14) [verbal predicate]
- a. \*Yakala **i**-di-m.  
 catch COP-PAST-1SG  
 intended: ‘I caught it.’
- b. \*Yakala-**y**-di-m.  
 catch-COP-PAST-1SG  
 intended: ‘I caught it.’
- c. \*Getir **i**-di-m.  
 bring COP-PAST-1SG  
 intended: ‘I brought it.’
- d. \*Getír-Ø-di-m.  
 bring-COP-PAST-1SG  
 intended: ‘I brought it.’

The attachment position of the copula indicates the presence of a smaller morphosyntactic word in non-verbal predicates. Verbal predicates lack the morphosyntactic boundary associated with the copula, and consequently do not exhibit optionally separable tense and agreement morphology.

### 2.2.3 Polar Question Marker *mI*

The polar question marker *-mI* attaches to the right edge of phrases in biased and unbiased polar questions. The host of the polar question marker coincides with sentential stress and focus (Kamali, 2011). Under predicate focus, verum focus, or in the lack of any focused elements, the polar question marker attaches to the predicate in distinct positions for verbal and non-verbal predicates.

In verbal predicates, the polar question follows tense and agreement affixes, attaching to the right edge of the fully inflected verb (15-a). It cannot attach to a smaller unit (15-b).

In non-verbal predicates, the polar question marker attaches between the right edge of the predicate and tense-agreement morphology, to the morphosyntactic domain that coincides with the stress assignment domain discussed in §2.2.1, as in (16-a).

- (15) a. [Yakala-dı-n] =**mI**?  
 catch-PAST-2SG =**Q**  
 ‘Did you catch it?’  
 b. \*[Yakala] =**mI**-dı-n?  
 catch =**Q**-PAST-2SG  
 ‘Did you catch it?’

- (16) a. Yakala-yacak =**mI**-Ø-Ø-sınız?  
 catch-FUT =**Q**-COP-PRES-2PL  
 ‘Are you all going to catch it?’  
 b. \*Yakala =**mI**-yacak-Ø-Ø-sınız?  
 catch =**Q**-FUT-COP-PAST-2PL  
 intended: ‘Are you all going to catch it?’

The polar question marker attaches to phrases regardless of category — NP, PP, AP, DegP, etc. — elsewhere in the clause. However, inside the predicate domain:

- in verbal predicates, *-mI* cannot attach to constituents smaller than TP (e.g. ApplP, NegP, vP)
- in participial predicates, it cannot attach to constituents smaller than AspP (e.g. ApplP, NegP, vP)

Evidence from the placement of the polar question marker, combined with evidence from the relative domain of stress assignment, points to a morphosyntactic difference between participial and verbal forms:

- verbal forms consist of a complex head that includes T; the complex head is the domain for *-mI* attachment and for phonological stress placement.
- non-verbal (participial) forms consist of a complex head that includes Asp but crucially, not T; the complex Asp head is the domain for *-mI* attachment and for phonological stress placement. T is an enclitic.

### 2.2.4 Suspended Affixation

Suspended affixation involves a head — realized as an affix — scoping over a conjunction that is its complement (Hankamer, 2008). Turkish allows optional suspended affixation in some nominal and predicate structures.

- (17) [nominals]
- |                                                                                                   |                                                                                                   |
|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| a. kedi- <b>ler</b> ve köpek- <b>ler</b><br>cat- <b>PL</b> CONJ dog- <b>PL</b><br>‘cats and dogs’ | b. kedi ve köpek- <b>ler</b><br>cat CONJ dog- <b>PL</b><br>‘cats and dogs’ (Hankamer, 2008, p. 1) |
|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|

- (18) [predicates]
- a. Köy-ün en zengin adam-ı-**y-dı-m** ve bölge-nin en ünlü  
 village-GEN most rich man-POSS-COP-PAST-**1SG** CONJ area-GEN most famous  
 hırsız-ı-**y-dı-m**.  
 thief-POSS-COP-PAST-**1SG**  
 ‘I was the richest man in the village, and (I was) the most famous thief in the area.’

- b. Köy-ün en zengin adam-ı ve bölge-nin en ünlü hırsız-ı-y-dı-m.  
 village-GEN most rich man-POSS CONJ area-GEN most famous thief-POSS-COP-PAST-1SG  
 'I was the richest man in the village, and (I was) the most famous thief in the area.'

(Hankamer, 2008, p. 2)

Non-verbal predicates exhibit suspension of the copula and tense-agreement morphology, as in (18) & (19-a), while verbal predicates do not, as in (19-b).

- (19) a. Deniz-e gid-ecek, güneş-te kızar-acak, ve eğlen-ecek-Ø-ti-k.  
 sea-DAT go-FUT sun-LOC roast-FUT CONJ enjoy.REFL-FUT-COP-PAST-1PL  
 'We were going to go to the sea, get roasted in the sun, and have fun.'

adapted from (Hankamer, 2008, p. 3)

- b. \*Deniz-e git, güneş-te kızar, ve eğlen-di-k.  
 sea-DAT go sun-LOC roast CONJ enjoy.REFL-PAST-1PL  
 intended: 'We went to the sea, got roasted in the sun, and had fun.'

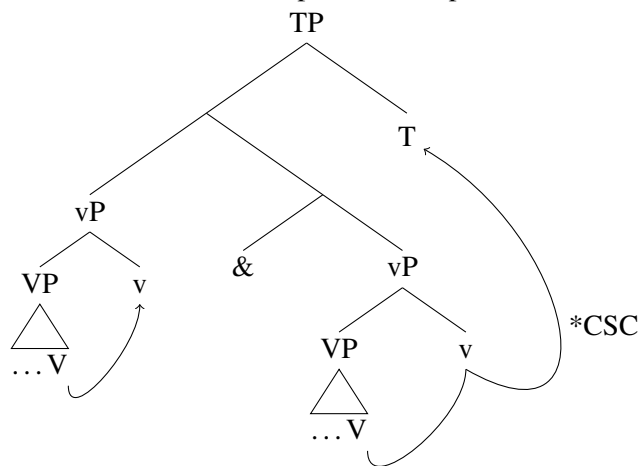
adapted from (Hankamer, 2008, p. 3)

Zanon 2014 formulates the ungrammaticality of suspended affixation in verbal predicates as a Coordinate Structure Constraint (CSC) violation.

- (20) \*Biz dün kıyafet al ve bugün meyve sebze al-dı-k.  
 1PL yesterday clothes buy CONJ today fruits\_and\_veggies buy-PAST-1PL  
 'We bought clothes yesterday and bought fruits and vegetables today.'

(20) is not grammatical for two reasons: The morphological requirement for the verb has not been fulfilled since there is no tense and agreement morphology attached to it (Kabak, 2007), and moving the verb to T results in asymmetrical extraction from a coordinate structure, violating CSC (Baker, 1985, 1988), as schematized in (21).

- (21) CSC Violation in verbal predicate suspended affixation



### 3 Coordination and backward gapping

What Zanon 2014 does not observe is that coordination with verbal predicates *is* acceptable when the the first conjunct verb is omitted, as in (22) (compare with (20)).

- (22) Biz dün kıyafet ve bugün meyve sebze al-dı-k.  
 1PL yesterday clothes CONJ today fruits\_and\_veggies buy-PAST-1PL  
 ‘We bought clothes yesterday and bought fruits and vegetables today.’

This is expected if:

- across-the-board head-movement to T is attested in the structures described in Zanon 2014, or
- if the verb in the left conjunct undergoes backward gapping.

Differences in participial vs. verbal predicates in such constructions (as evidenced in a pilot study) indicate that the correct analysis involves two components:

1. different sizes of coordinated constituents in the non-verbal vs. the verbal cases;
2. backward gapping, rather than ATB head-movement

### 3.1 Pilot Study Evidence: subject agreement

I ran two pilot studies looking at subject feature mismatch in verbal and non-verbal predicates in the context of suspended affixation.<sup>2</sup>

#### 3.1.1 Study 1

Focusing on verbal predicates, I conducted an acceptability judgment task with a 1-5 Likert scale with 21 native Turkish speakers, with the variables:

- First conjunct subject person
- Last conjunct subject person
- First conjunct subject number
- Last conjunct subject number
- Agreement with the subject of the First vs. Last conjunct
- Overt (-*ler*) vs. covert (- $\emptyset$ ) 3PL agreement<sup>3</sup>

The stimuli were of the form:

- (23) \*Ben çay ve sen kahve iç-ti-**m**.  
 1SG tea CONJ 2SG coffee drink-PAST-**1SG**  
 intended: ‘I drank coffee and you drank tea.’ [first conj. agreement]
- (24) ?Ben çay ve sen kahve iç-ti-**n**.  
 1SG tea CONJ 2SG coffee drink-PAST-**2SG**  
 intended: ‘I drank coffee and you drank tea.’ [last conj. agreement]

The results showed variation of grammaticality with respect to the person features of the subject in each conjunct, but all types of mismatch were degraded, as in Table (26).

A confound: matching persons in this study were degraded because the stimuli template had overt subjects, which

<sup>2</sup>I also tested for which conjunct agrees with the overt predicate, but only discuss last conjunct agreement here. Across the board, first conjunct agreement was very clearly ungrammatical, receiving an average ratings of 1.33/5 in Study 1 and 1.45/7 in Study 2 on the Likert scale.

<sup>3</sup>There is variation in the 3rd person pl. verbal agreement morphology in current day Turkish within speaker and across speakers, as well as registers. The results did not show any specific pattern related to the question under discussion.

is pragmatically dis-preferred in Turkish. When only one subject is overt, person-matching coordinations are grammatical, as in (25) (same as (22)).

- (25) Biz dün kıyafet ve bugün meyve sebze al-dı-k.  
 1PL yesterday clothes CONJ today fruits\_and\_veggies buy-PAST-1PL  
 ‘We bought clothes yesterday and bought fruits and vegetables today.’

- (26) Study 1: Person combination in Last Conjunct Agreement with Verbal Predicates

first conj person	last conj person	avg score.	stdev	num judgements
3	1	4.29	2.34	84
2	1	3.85	2.14	84
3	2	3.52	2.25	84
1	2	3.49	2.17	84
2	3	3.40	2.06	126
1	3	3.15	2.14	126

### 3.1.2 Study 2

I conducted a second study, rating both verbal and participial predicates with a 1-7 scale with 8 native Turkish speakers,<sup>4</sup> with the variables:<sup>5</sup>

- First conjunct person
- Last conjunct person
- First conjunct subject number
- Last conjunct subject number
- Agreement with the subject of the first vs. last conjunct
- Verbal vs. PFV participial predicate

The stimuli were of the form:

- (27) ??Ben dün akşam çay, Ø Aliler o sırada kahve iç-ti-Ø.  
 1SG yesterday\_evening tea CONJ Ali\_and\_others that\_time coffe drink-PAST-3PL  
 ‘I drank tea yesterday evening, and Ali and the others drank coffee.’ [verbal pred.]
- (28) ?Ben dün akşam çay, Ø Aliler o sırada kahve içmiş-ti-Ø.  
 1SG yesterday\_evening tea CONJ Ali\_and\_others that\_time coffe drink-PFV-COP-PAST-3PL  
 ‘I drank tea yesterday evening, and Ali and the others drank coffee.’ [participial pred.]

Once again, all types of person mismatch were degraded, however across the board, participial predicates were more acceptable than verbal predicates under mismatch, as in (29).

- (29) Study 2 – Last Conjunct Agreement by Persons and Predicate Type

The combination 3<sup>rd</sup>&1<sup>st</sup> is considerably more acceptable than the rest of person-mismatches. See §4 for more discussion.

<sup>4</sup>I omitted one speaker’s judgements, because their grammar didn’t allow this type of construction at all.

<sup>5</sup>I omitted person&number-matching stimuli in the design as they are degraded with overt subjects and acceptable otherwise.



first conj person	last conj person	predicate type	avg score	stdev	num judgements
1	2	non-verbal	5.14	1.60	28
2	1	non-verbal	4.75	1.60	28
1	3	non-verbal	4.75	1.67	28
3	2	non-verbal	4.57	2.12	28
3	1	non-verbal	4.46	1.91	28
2	3	non-verbal	4.39	1.81	28
1	2	verbal	4.46	1.88	28
3	1	verbal	4.46	1.95	28
2	1	verbal	4.43	1.87	28
3	2	verbal	4.32	2.00	28
2	3	verbal	3.96	1.79	28
1	3	verbal	3.86	2.16	28

When prompted to comment on whether the verbal or non-verbal stimuli were more acceptable, most speakers preferred participial predicates to verbal predicates under subject person mismatch.

### 3.2 Person Mismatch in Clausal Coordination

Differences between verbal and participial forms in suspended affixation suggest distinct analyses for the two morphosyntactic types.

In coordination with participial forms, the results are best if the subject's person features in the two conjuncts are identical.

- (30) **Sen** dün ona baklava ve bugün bize kadayıf getirmiş-**sin**.  
**2SG** yesterday 1PL-DAT baklava CONJ today 1PL-DAT kadayıf bring-EVID-COP-PRES-**2SG**  
 '(Apparently) you brought him/her baklava yesterday and brought us kadayıf today.'

If the subject's features do not match across the two conjuncts, the result is somewhat degraded but still acceptable.

- (31) ?**Sen** dün bize baklava ve **o** (da) size kadayıf getirmiş-**Ø**.  
**2SG** yesterday 1PL-DAT baklava CONJ **3SG** TOP 2PL-DAT kadayıf bring-EVID-COP-PRES-**3SG**  
 '(Apparently) you brought us baklava yesterday and s/he brought you kadayıf.'

The same surface configurations treat verbal predication differently. With matching subject features in both conjuncts, the result is grammatical, as in (32); but non-matching person features in the subjects of each conjunct yield real ungrammaticality, as in (33).

- (32) **Sen** dün ona baklava ve bugün bize kadayıf getir-di-**n**.  
**2SG** yesterday 1PL-DAT baklava CONJ today 1PL-DAT kadayıf bring-PAST-**2SG**  
 'You brought him/her baklava yesterday and brought us kadayıf today.'
- (33) \***Sen** dün bize baklava ve **o** (da) size kadayıf getir-di-**Ø**.  
**2SG** yesterday 1PL-DAT baklava CONJ **3SG** TOP 2PL-DAT kadayıf bring-PAST-**3SG**  
 'You brought us baklava yesterday and s/he brought you kadayıf.'

This evidence helps us to choose two analyses (out of a logically possible four) in the next section, §3.3. To preview the results:

- verbal predication: coordination of TP & gapping of a complex T head. (→ not suspended affixation!)
- non-verbal predication: coordination of AspP and gapping of a complex Asp head. (→ suspended affixation)

### 3.3 Coordination of TP and AspP: logical possibilities

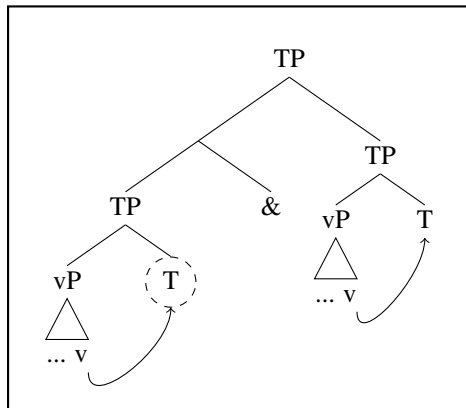
There are two possible sizes for coordination:

- TP, as in (34-a) and (34-b).
- A smaller constituent than TP (such as vP, NegP, AspP), as in (34-c) and (34-d).

The best alternatives from the four structures in (34) are (34-a) for verbal predicates, and (34-d) for participial predicates. Verbal predicates involve coordinated TPs with gapping of T, while participial predicates involve suspended affixation with gapping of Asp.

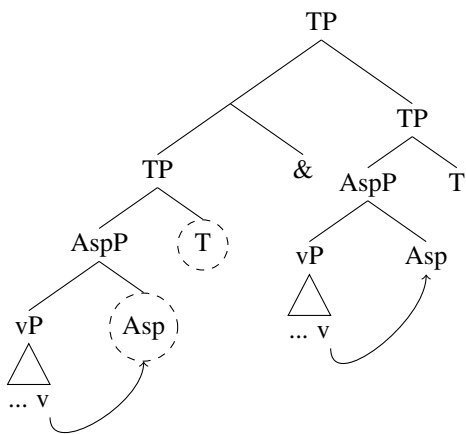
(34) Possible analyses for Coordinated Structures

a.



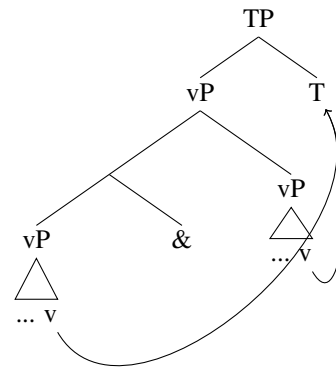
Verbal predicate, TP coordination,  
Head-movement to T,  
Gapping of T

b.



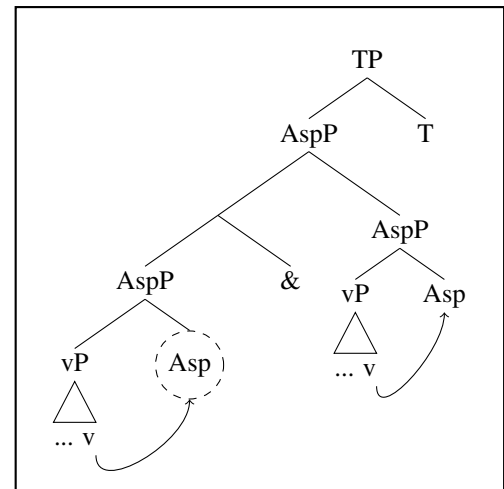
Participial Predicate, TP coordination,  
Head-movement to Asp,  
Gapping of Asp & T

c.



Verbal predicate, vP coordination,  
Across-the-board head-movement to T

d.

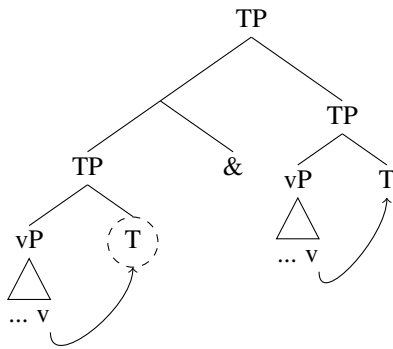


Participial predicate, AspP coordination,  
Head-movement to Asp,  
Gapping of Asp

**Hypothesis** To make a sense of these facts, I will assume that *gapping* in Turkish requires a stronger identity than gapping in English, requiring *featural* identity as well as *lexical* identity. See §3.4 for the formulation and discussion of this identity requirement.

**Structure (34-a)** The coordination in (34-a) is of a TP-sized constituent, and the head movement stops at two different T heads. Therefore the mechanism that yields a string with one overt verb involves gapping a complex T head.

(34-a)

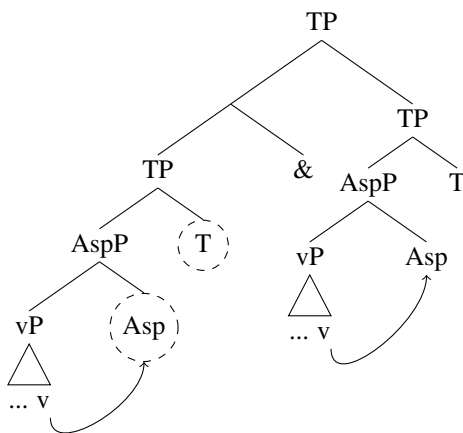


Verbal predicate, TP coordination,  
Head-movement to T,  
Gapping of T

This yields the single-predicate string (see (25), (32), and (33)), and the person-matching effects, because the gapped T head has to match in  $\phi$ -features with the pronounced T.

**Structure (34-b)** The coordination in (34-b) is AspP-sized, with the two head movement chains terminating at two separate Asp heads. The mechanism that yields the string with one pronounced predicate has to mark two heads for non-pronunciation: a complex Asp head, and a T head.

(34-b)



Participial Predicate, TP coordination,  
Head-movement to Asp,  
Gapping of Asp & T

This yields the single-predicate string (see (30) and (31)). However, this structure would generate person-matching effects in non-verbal predicates. As a T head is being gapped, the gapped T would have to match in  $\phi$ -features to the

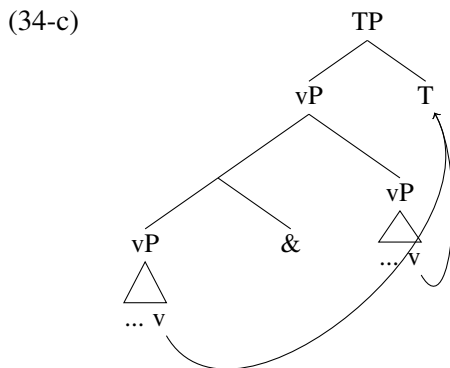
overt T, undergenerating person-mismatch examples with participial predicates such as (31).

One other possible problem with the structure (34-b) is that it involves the gapping of two separate heads, which are not independently gappable, as in (35).

- (35) a. Onlar dün buralarda dolaş-ıy-or-Ø-du-lar ve demin oralarda  
 3PL yesterday here-LOC wander-**PROG-COP-PAST-3PL** CONJ just\_now there-LOC  
 dolaş-ıy-or-Ø-du-lar.  
 wander-**PROG-COP-PAST-3PL**  
 ‘Yesterday, they were walking over here, but just now they were walking over there.’  
 [overt Asp, overt T]
- b. Onlar dün buralarda dolaş-ıy-or ve demin oralarda dolaş-ıy-or-Ø-du-lar.  
 3PL yesterday here-LOC wander-**PROG** CONJ just\_now there-LOC wander-**PROG-COP-PAST-3PL**  
 ‘Yesterday, they were walking over here, but just now they were walking over there.’  
 [overt Asp, unpronounced T]
- c. \*Onlar dün buralarda i-di-ler ve demin oralarda dolaş-ıy-or-Ø-du-lar.  
 3PL yesterday here-LOC **COP-PAST-3PL** CONJ just\_now there-LOC wander-**PROG-COP-PAST-3PL**  
 intended: ‘Yesterday, they were walking over here, but just now they were walking over there.’  
 [unpronounced Asp, overt T]
- d. Onlar dün buralarda ve demin oralarda dolaş-ıy-or-Ø-du-lar.  
 3PL yesterday here-LOC CONJ just\_now there-LOC wander-**PROG-COP-PAST-3PL**  
 intended: ‘Yesterday, they were walking over here, but just now they were walking over there.’  
 [unpronounced Asp, unpronounced T]

So, (34-b) overgenerates and undergenerates.

**Structure (34-c)** The coordination in (34-c) is vP-sized, and both head-movement chains terminate at the single T head. This is across-the-board head-movement extracting from all conjuncts, which requires identity of the extracted material, which are complex v heads in this case.



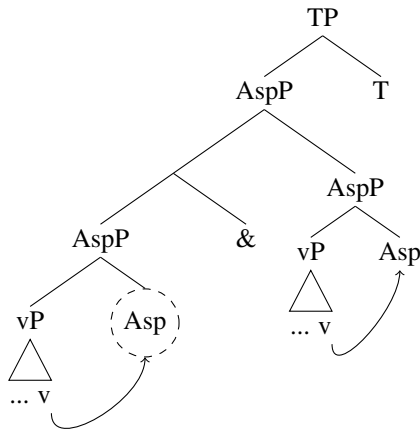
Verbal predicate, vP coordination,  
 Across-the-board head-movement to T

This would yield the single-predicate string, as in (32) by extraction of all verbs to one head, but it would allow person-mismatches. Since there is only one T, T would agree with only one subject, regardless of the subjects of the

other conjuncts.<sup>6</sup> So, (34-c) overgenerates, not yielding the person-matching found in verbal predicates.

**Structure (34-d)** The coordination in (34-d) is AspP-sized, with the two head-movement chains terminating in two separate Asp heads. The mechanism that yields the single-predicate string is gapping of a complex Asp head.

(34-d)



Participial predicate, AspP coordination,  
Head-movement to Asp,  
Gapping of Asp

This structure allows person-mismatches in participial predicates because the gapped element is a complex Asp head without  $\phi$ -features, and therefore person-mismatches do not pose a violation of featural identity in gapping. The single T head in the structure can agree with one subject regardless of the features of the other predicates.

### 3.4 Identity in Gapping

English gapping requires lexical identity. If the verbs are not lexically identical they cannot be gapped, as in (36)

- (36) a. John likes to eat lasagna and \*(make) pasta.  
b. John ate lasagna and \*(made) pasta.

However, English gapping allows mismatch in agreement morphology (Johnson, 2017), as in (37).

- (37) I like pasta and Jill (likes) lasagna.

However, we have seen that Turkish gapping is fully acceptable with matching subject persons, and degraded with person-mismatch. So, I propose that Turkish has a strong identity requirement for gapping, requiring featural identity and lexical identity of gapped heads.

This will enforce matching of subject person features in verbal predication (34-a).

<sup>6</sup>The mechanism of agreement in these coordinated structures is not clear. The agreement can only be with the final conjunct subject, which raises questions about locality and the role of AGREE.

## 4 Discussion

### Summary

- Previous work (Kornfilt, 1996; Kelepir, 2001; Zanon, 2014) has illuminated a plethora of differences between verbal and non-verbal predication in Turkish, formalized as a difference in the stopping-point of head movement in the clausal spine (T for the former, Asp for the latter).
- Taking this as a starting point helps us to understand the underlying structural commitments that are necessary in order to provide an analysis of configurations involving clause-sized coordination and omission of the verb/participle in the left conjunct (see pilot study §??).
- I have argued that:
  - in non-verbal predication, the underlying structure for such configurations involves genuine suspended affixation: coordination of AspP and gapping of the participle in the left conjunct.
  - in verbal predication, there is no suspended affixation; instead, there is coordination of TPs with gapping of the T in the left conjunct.
  - the analysis requires that strict featural identity be required in gapping of individual heads.
- These analytical commitments provide a way of understanding why matching of subject features seems required in the verbal configurations of interest, whereas subject person mismatch is more acceptable with participial forms in surface-similar configurations.

### Open Questions

#### Empirical Questions

- Is there a ranking to the degradation of different subject combinations in the configurations of interest (i.e., is the featural interaction richer?)
- What is the final-conjunct agreement mechanism in participial forms?

#### Theoretical Questions

- To the extent there is gradation in verbal vs. participial predicate gapping, why is across-the-board movement in verbal predication seemingly not available?
- Why is there a featural identity in Turkish gapping? What are our commitments about the uniformity of gapping crosslinguistically?

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