

Processing of singular agreement controller in Turkish

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Abstract

The present study investigates whether the properties of the singular agreement controller in Turkish comitative construction ease the processing of the comitative construction and the singular agreement controller checks the agreement type on the verb (singular vs. plural). The data collected from 134 native Turkish speakers indicated that only one of the singular agreement controllers: the second person *sen* 'you' (both singular and plural agreement) was processed slower than the others, and there was no significant main effect of the agreement type (plural vs. singular).

Keywords: comitative construction, sentence processing, Turkish

Introduction

Comitative constructions in Turkish

Comitative is a broad term utilized to express the functions of modality, and accompaniment, and instrumentality (Haspelmath, 2004; McNally, 1993; Stassen, 2000). Almost all languages own their way of conveying the comitative meaning. Every language employs a different marker to convey this meaning, such as *mit* 'with' in German, *ile* 'with' in Turkish, or *with* in English.

Comitative construction in Turkish is expressed with a free post-position *ile* 'with'. This post-position is also formed with a bound allomorph *(y)la/le* as it is directly attached to the word. Turkish comitative construction can convey the relations of modality as in (1a), instrumentality in (1b) and coordination in (1c) (Göksel & Kerslake, 2004; Kornfilt, 1997).

- (1) a) Basri maç-ı heyecan-la bekli-yor-Ø.
Basri.nom match-ACC excitement-with wait-PRSNT-3SG
'Basri is waiting for the match with excitement.'
- b) Basri ekmeğ-i bıçak-la kes-ti-Ø.
Basri.nom bread-ACC knife-INSTR cut-PAST-3SG
'Basri cut the bread with a knife.'
- c) Basri ile ben restoran-a git-ti-m.
Basri.nom with I restaurant-DAT go-PAST-1SG
'I went to the restaurant with Basri.'

As shown in (1c), *ile* ‘with’ may refer to the human companion and appears between two nouns ‘Basri’ and ‘I’. However, the verb agrees with the second noun, first-person singular. This indicates that the structure is expressed as a prepositional phrase and the second DP checks the agreement. I referred to this DP as **singular agreement controller** as it checks the agreement on the verb and causes the singular agreement.

The interesting thing is that Turkish also allows the sentences as in (2). In other words, the comitative construction functions as comitative coordination, and no effect of singular agreement controller is observed. This structure can be interpreted as symmetrical comitative construction as both participants play equal roles. Nevertheless, the singular and plural reading of the same structure may create ambiguity until the verb is seen in the sentence.

- (2) Basri ile ben restoran-a git-ti-k.
Basri.nom with I restaurant-dat go-PAST-1PL
‘Basri and I went to the restaurant.’

Research questions

- 1) Do the properties of the singular agreement controller (1st, 2nd and 3rd person) in the comitative construction ease the processing of the comitative construction?
- 2) Do the properties of the singular agreement controller in the comitative construction make one of the two readings more likely (singular vs. plural)?

Expectations

As there is no previous literature on this topic, my null hypothesis is to find no effect of the properties of singular agreement controller on the interpretation comitative construction in Turkish. This study is significant because there is no previous literature investigating the comitative construction in Turkish from the experimental point of view.

Methodology

Participants

Data were collected from 134 native Turkish speakers (97 females and 36 males). They had no problem with their visions and no problem with their language or reading. Their ages were between 18 and 22 ($M=19.15$, $SD=0.88$).

Instruments

The experimental items consisted of eight regions starting with a comitative construction with a singular agreement controller followed by an adverbial of place, the verb, and an adverbial of time. As the independent variables, the agreement on the verb and the singular agreement controller were changed across the lists. The three types of singular agreement controllers (1st, 2nd, and

3rd person) were distributed across four lists with eight experimental items mixed with 12 filler items. A sample experimental item with the first-person singular agreement controller was shown in Table 1.

Table 1. Distribution of Regions.

R1	R2	R3	R4	R5	R6	R7	R8
Senle	ben	resim	sergisi-nde	gez-(i)yor.du-k	uzun	zaman	önce.
with you	I	exhibition-LOC	visit-prog.past-1pl	long	time	ago	
‘You and I were visiting the painting exhibition a long time ago.’							

Regions 6 and 7, spill-over regions, are critical regions. The verb region was not chosen as the critical region because its length differs since Turkish is an agglutinative language and the length of the affixes differs across the cases. Data were gathered through a self-paced reading task via a non-cumulative moving-window paradigm. Ibex Farm Program was used to collect data (Drummond, 2016). Ibex Farm is an easy way access via a link on any browser. The experiment started with five practice items, and they experimented.

Data Analysis

The participants’ accuracy rates for the comprehension questions were checked, and those with less than 70% accuracy were removed. To eliminate the extreme values, the reading times lower than 100 ms (0.05% of all data) and higher than 3000 ms (0.2% of all data) were removed. Secondly, data were transformed via Lg10 transformation. The reaction times above 2.5 standard deviations were removed (4% of all data). The removed values were replaced by the mean of the region of this specific item. In the analysis, the dependent variable was the reaction times while the independent variable was the singular agreement controller (1st, 2nd or 3rd) and agreement on the verb (singular and plural). One-way Repeated-Measures ANOVA was conducted with a within-subject variable, the singular agreement controller (1st, 2nd, and 3rd), and a between-subject factor, the agreement type on the verb (plural and singular).

Results

One-way Repeated-Measures ANOVA (item analysis) indicated no significant main effect of the agreement type [$F_2(1, 9)=2.1, p=.177$], but there was a significant main effect of the singular agreement controller [$F_2(1, 9)=6.6, p=.017$], in addition to two-way interaction between agreement type and the singular agreement controller [$F_2(2, 9)=5.4, p=.028$] in Region 6. Post hoc comparisons using the Bonferroni correction demonstrated a significant difference between 2nd and 1st (*sen* ‘you’ and *ben* ‘I’) and between 2nd and 3rd (*sen* ‘you’ and *o* ‘he/she’) ($p<.05$). The second-person singular agreement controller was the hardest to process. Nevertheless, the same analysis on Region 7 showed no main effect of agreement [$F_2(1, 9)=.19, p=.677$], no main effect of

singular agreement controller [$F_2(2, 9) = 1.2, p = .338$] or no interaction between two [$F_2(2, 9) = 0.66, p = .542$].

Discussion and conclusion

To summarize my results, when the singular agreement controller is investigated, only one of the singular agreement controllers: the second person *sen* 'you' was processed slower than the others. There was no significant main effect of the agreement type (plural vs. singular).

While investigating why the second person was hardest to process, the person hierarchy can be visited. Regarding person hierarchy, in the traditional account, the first person is followed by the second and the third (1st > 2nd > 3rd) (Filimonova, 2002). Therefore, person hierarchy cannot explain my results since it predicts that the processing of the comitative construction will be easier when the singular agreement controller is *sen* 'you' or *ben* 'I' compared to *o* 'he/she', contrary to fact. I do not know the motivation for this processing difficulty, but one part considers both semantic and morphological factors. As the 3rd person is not marked on the verb in Turkish, it may lessen its processing load, and as to the 1st person, as Filimonova (2002) suggested, it is higher in the hierarchy. Therefore, it may not be surprising to see its easiness of processing. For further research, it would be worth investigating the processing of the second-person *sen* 'you' in the regular coordination to see whether this processing difficulty in comitative construction is because of the nature of the comitative.

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