WORD ORDER PREFERENCES OF DITRANSLITVES IN TURKISH*

BARIŞ KAHRAMAN
Çanakkale Onsekiz Mart University

1 Introduction

There are two general views regarding the canonical word order of ditransitives in Turkish. According to one view, the canonical word order of ditransitives is [NOM > ACC > DAT] (nominative, accusative, and dative; respectively) as shown in (1) (e.g., Kornfilt, 2003; Kural, 1992; Underhill, 1972). On the other hand, Öztürk (2005), based on Miyagawa and Tsujioka (2004)’s analysis in Japanese, showed that two canonical word orders of ditransitives may exist in Turkish. According to Öztürk, when the dative noun has a possessor interpretation, the canonical word order is [NOM > DAT > ACC] as shown in (2), and when the dative noun has a locative interpretation, the canonical word order is [NOM > ACC > DAT] as shown in (1).

(1) Ali       Veli-yi    ev-e       götür-dü
      Ali-NOM   Veli-ACC  house-DAT  bring-PAST
‘Ali took Veli home.’

(2) Ali       Veli-ye    ev-i       göster-di
      Ali-NOM   Veli-DAT  house-ACC  show-PAST
‘Ali showed Veli the house.’

* Travel expenses were supported by Nippon Foundation Japanese Language Education Fund at Çanakkale Onsekiz Mart University (2012). I would like to thank Cem Bozşahin, Barış Kabak, Masatoshi Koizumi, Jaklin Kornfilt, Shigeru Miyagawa, Takashi Nakajima, Nobuaki Nishio, Duygu Özge, Deniz Zeyrek, reviewers and audience of WAFL 8 at the University of Stuttgart for their constructive comments, questions and suggestions. I also would like to thank organizers for their warm hospitality, Rosalyne Chiu, Salim Razi, Hiromu Sakai and Atsushi Sato for their support at various stages of this study. Finally, special thanks go to my students who participated in the experiments at Çanakkale Onsekiz Mart University. All remaining errors and shortcomings are, of course, my own.
However, these generalizations were provided from the limited number of examples by the intuitions of researchers and/or their informants, and Turkish native speakers’ word order preferences are still not fully understood. In other words, the psycholinguistic validity of these generalizations is not fully tested in Turkish. In order to provide a piece of psycholinguistic evidence for the word order preferences of ditransitives in comprehension, Kahraman, Sato and Sakai (2010) conducted a self-paced reading experiment; and compared the reading times of the sentences with the [NOM > DAT > ACC] and [NOM > ACC > DAT] orders in Turkish. The results showed that when the dative noun had a possessor interpretation, Turkish native speakers read the [NOM > DAT > ACC] order faster than that of the [NOM > ACC > DAT] order. On the other hand, when the dative noun had a locative interpretation, the [NOM > ACC > DAT] order was read faster than the [NOM > DAT > ACC] order. These results suggest that the thematic role of the dative noun has an impact on the comprehension ease of ditransitives in Turkish.

Since Kahraman et al. (2010) focused only on the comprehension side of ditranstives in Turkish; it is unclear whether the thematic role of the dative noun has also an impact on the word order preferences of ditransitives in the production. It is assumed that native speakers generally tend to prefer the canonical word order over the non-canonical word order (e.g., Koizumi and Tamaoka, 2004; Sekerina, 2003). If we assume that the thematic role of the dative noun has an impact on the word order preferences of ditransitives in Turkish, then Turkish speakers might prefer the [NOM > DAT > ACC] order over the [NOM > ACC > DAT] order, when the dative noun has a possessor interpretation. On the other hand, when the dative noun has a locative interpretation, Turkish speakers might prefer the [NOM > ACC > DAT] order over the [NOM > DAT > ACC] order (Kahraman et al., 2010; Öztürk, 2005). If the thematic role of the dative noun does not have an impact on the word order preferences, Turkish speakers might always prefer the [NOM > ACC > DAT] order over the [NOM > DAT > ACC] order in the production (Kornfilt, 2003; Kural, 1992; Underhill, 1972).

In order to confirm these predictions derived from the above generalizations, and to provide further psycholinguistic evidence for the word order preferences of ditransitives in Turkish, the present study aims to test whether the thematic role of the dative noun affects the production order of accusative and dative nouns. For this purpose, two sentence generation experiments were conducted in the present study. The results showed that the production order of the dative and the accusative nouns varied due to the thematic role of the dative noun, suggesting that two canonical word orders of ditransitives would psycholinguistically exist in Turkish.

2 Experiments

Miyagawa and Tsujioka (2004) pointed out that when the dative noun is an animate noun, it has a possessor interpretation, and when the dative noun is an inanimate noun, it has a locative interpretation. Therefore, animacy of the dative noun was manipulated in order to control the thematic roles in the two experiments. In Experiment 1, the dative noun was inanimate; hence it had a locative interpretation. On the other hand, in Experiment 2, an animate noun was used for the dative noun, to make sure that it has a possessor interpretation. In the two experiments, participants were asked to generate sentences from the word lists, including the verb, nominative, accusative and dative nouns, as shown below (see Table 1 and Table 2).
2.1 Experiment 1

The aim of Experiment 1 was to explore the production order of the accusative, dative and nominative nouns, when the dative noun had a locative interpretation. Therefore, inanimate nouns were used for the dative nouns in Experiment 1. Thirty-three undergraduate students (average age: 22, SD = 2.5) participated in Experiment 1. They were all native speakers of Turkish, and were asked to generate sentences from the presented word lists as shown in Table1.

<table>
<thead>
<tr>
<th>Table 1. Example of target word lists in Experiment 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIRLATMAK (to throw)</td>
</tr>
<tr>
<td>TOPU (ball-ACC)</td>
</tr>
<tr>
<td>HAVAYA (air-DAT)</td>
</tr>
<tr>
<td>BASKETBOLCU (basketball player-NOM)</td>
</tr>
</tbody>
</table>

The word lists were presented in separate tables divided into two rows and two columns. In order to eliminate the possible effect of occurrence of word sequences on the production order, three different booklets were prepared, and the position of the words was changed pseudo-randomly, excluding the verb. The verb was always presented in the upper left column. The number of target items (word lists) was twenty. In addition to these target items, sixty filler word lists were prepared, and inserted between the target word lists, in order to eliminate the possible priming effect.

2.1.1 Results and Discussion

In total, the participants generated 660 ditransitive sentences. All of these sentences were grammatical. The number of the [NOM > ACC > DAT] order was 562 (85%), and the [NOM > DAT > ACC] order was 77 (12%). The number of other word orders such as [ACC > NOM > DAT] was 21 (3%).

![Fig. 1 Production rates of [NOM > ACC > DAT] and [NOM > DAT > ACC] in Exp 1.](image1.png)

The statistical analysis was conducted on the production rates of the [NOM > ACC > DAT] and [NOM > DAT > ACC] orders. The results of analysis of variance (ANOVA) for repeated measures showed that the difference between the two word orders was statistically significant in both subject and item analyses ($F_1 (1, 32) = 614.79, p < .001; F_2 (1, 19) = 215.86, p < .001$).

This result shows that the production rate of the [NOM > ACC > DAT] order is statistically higher than the [NOM > DAT > ACC] order. This suggests that Turkish native speakers preferred the [NOM > ACC > DAT] order over the [NOM > DAT > ACC] order, when the dative noun had a locative interpretation. At this stage, we are not sure whether this preference
holds or differs, when the dative noun has a possessor interpretation. In order to answer this question, Experiment 2 was conducted with the same participants.

2.2 Experiment 2

The aim of the Experiment 2 was to explore the production order of ditransitive sentences, when the dative noun had a possessor interpretation. Therefore, animate nouns were used for the dative nouns in Experiment 2 as shown in Table 2.

Table 2. Example of target word lists in Experiment 2

<table>
<thead>
<tr>
<th>GÖSTERMEK (to show)</th>
<th>KIZA (girl-DAT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>YOLU (way-ACC)</td>
<td>ÇOCUK (boy-NOM)</td>
</tr>
</tbody>
</table>

The number of target items was twenty, and the number of filler items was sixty. The procedure and participants were identical to Experiment 1.

2.2.1 Results and Discussion

The participants generated 660 grammatical ditransitive sentences in total. The number of the [NOM > ACC > DAT] order was 201 (30%), and the [NOM > DAT > ACC] order was 410 (62%). The number of other word orders was 49 (8%).

![Fig. 2 Production rates of [NOM > ACC > DAT] and [NOM > DAT > ACC] in Exp 2.](image)

The results of ANOVA for repeated measures showed that the difference between the [NOM > ACC > DAT] and the [NOM > DAT > ACC] orders was statistically significant ($F_1 (1, 32) = 37.72, p < .001; F_2 (1, 19) = 9.37, p < .01$).

This result shows that the production rate of the [NOM > DAT > ACC] order is statistically higher than the [NOM > DAT > ACC] order. The result of Experiment 2 suggests that, unlike Experiment 1, Turkish native speakers preferred the [NOM > DAT > ACC] order over the [NOM > ACC > DAT] order, when the dative noun had a possessor interpretation.

3 General Discussion

The aim of the present study was to test whether the thematic role of the dative noun affects the production order of accusative and dative nouns in ditransitive sentences of Turkish. In order to
control the thematic role of the dative noun, the animacy of the dative noun was manipulated. The results of two sentence generation experiments showed that the word order preferences of ditransitives varied due to the thematic role of the dative noun in Turkish. When the dative noun had a locative interpretation, Turkish native speakers produced more [NOM > ACC > DAT] order than the [NOM > DAT > ACC] order. On the other hand, when the dative noun had a possessor interpretation, more [NOM > DAT > ACC] order was produced than the [NOM > ACC > DAT] order. In other words, when the dative noun was an inanimate noun, Turkish native speakers overwhelmingly preferred the sentences like (3a) over (3b). On the contrary, when the dative noun was an animate noun, Turkish speakers preferred the sentences like (4b) over (4a).

(3)  
   a. Basketbolcu top-u hava-ya fırlat-ti  
      basketball player-NOM ball-ACC air-DAT throw-PAST  
   b. Basketbolcu hava-ya top-u fırlat-ti  
      basketball player-NOM air-DAT ball-ACC throw-PAST  
   ‘The basketball player threw the ball in the air.’

(4)  
   a. Çocuk yol-u kız-a göster-di  
      boy-NOM way-ACC girl-DAT show-PAST  
   b. Çocuk kız-a yol-u göster-di  
      boy-NOM girl-DAT way-ACC show-PAST  
   ‘The boy showed the way to the girl.’

The results of Experiment 1 and Experiment 2 are consistent with theoretical analysis of Öztürk (2005), which argued that two canonical word orders of ditransitives may exist in Turkish. The result of Experiment 2 is not consistent with the analyses of other researchers (e.g., Kornfilt, 2003; Kural, 1992; Underhill, 1972), which claimed that the [NOM > ACC > DAT] order is the canonical word order in Turkish. The present results are also in line with the comprehension data of Kahraman et al. (2010), which reported that the comprehension ease of ditransitive sentences differ due to the thematic role of the dative noun. Gennari and MacDonald (2009) argued that the language production and comprehension are closely related to each other. In this regard, the present study confirms that the production and comprehension of ditransitives are related to each other in Turkish. Taken together, assuming that the native speakers generally tend to prefer canonical word order over their non-canonical counterparts (e.g., Koizumi and Tamaoka, 2004; Sekerina, 2003), it can be said that two types of canonical word orders of ditransitives would psycholinguistically exist in Turkish.

In the two experiments, although different lexical items were used, in terms of the semantics, the most critical difference was the thematic role of the dative noun. Consequently, this difference led divergent production tendencies in the two experiments. Given this fact, it can be said that the thematic role of the dative noun, which is related to animacy, has an impact on the word order preferences of ditransitives in Turkish, as in the case of structure formation of Japanese ditransitives (Ito, 2007; Miyagawa and Tsujioka, 2004). This implies that we need to take animacy and hence thematic roles into consideration, to deal with word order issues by experimental methods in the head-final languages like Turkish and Japanese.
4 Future Issues

In the present study, only the animacy of the dative noun was manipulated. However, the animacy of the accusative noun might also have an impact on the word order preferences. In order to deepen our understanding regarding the word order preferences, we need to manipulate the animacy of the accusative noun as well.

In the two experiments, animate and inanimate dative nouns were presented with different verbs. Therefore, in addition to animacy (thematic role) of the dative nouns, verb types might have also influenced the production tendencies in the present study (Matsuoka, 2003). At this stage, we cannot fully distinguish whether the observed production tendencies are simply due to animacy of the dative noun or the verb type. In order to address this issue, and draw a robust conclusion, we also need to test the word order preferences of the sentences, in which a ditransitive verb can take animate and inanimate dative nouns as the argument, as in the case of throw. We leave these issues for future research.

References