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## Is there any difference between ‘She gave a book to her daughter’ and ‘she gave her daughter a book’? English-Spanish bilingual children’s acquisition of ditransitive constructions

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### Abstract

The present study seeks to provide an answer for the syntactic dichotomy in the derivation of the so-called ditransitive constructions in line with their acquisition. The focus is placed on the ditransitive verb “give” as it appears in the spontaneous production of three Spanish/English bilingual children. The analysis of the data tries to establish whether the acquisition of ditransitive structures complies with the Uniformity of Theta Assignment Hypothesis, Case Theory and the input to which children are exposed. Our findings have confirmed that the latter is the most reliable index which determines the order of acquisition.

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## 1. Introduction

It has been argued in the literature on double object constructions (DOCs henceforth) and *to*-datives that both structures have a semantic similarity (Larson, 1988). However, there is a dichotomy concerning their syntactic derivation since some authors put forward that DOCs are the original structure from which *to*-datives derive (Borer and Wexler, 1987) whereas others state that DOCs are syntactically derived (Baker, 1997; Chomsky, 1975). Acquisition data can shed light on the characterization of this syntactic derivation in that the order of acquisition of DOCs and *to*-datives can provide information about their complexity.

This paper is organized as follows: section 2 provides a theoretical background considering the issues that Theta and Case Theory pose in accordance with the derivation of ditransitives. Section 3 focuses on the hypotheses that this study deals with. Data selection and classification criteria are presented in section 4. Results, displayed in section 5, are seen under the light of the hypotheses put forward before. Section 6 presents the conclusions and points to directions for further work.

## 2. Theoretical Background and previous acquisition studies

### 2.1 Thematic roles in ditransitive constructions

Under the Uniformity of Theta Assignment Hypothesis (UTAH, Baker, 1988), DOCs and *to*-dative structures share an underlying syntactic structure due to their thematic relationship. As shown in examples (1) and (2), the theme and beneficiary roles bear the same thematic distribution.

- |     |          |                     |                        |                      |
|-----|----------|---------------------|------------------------|----------------------|
| (1) | She gave | <u>a book</u>       | <u>to her daughter</u> | [ <i>to</i> -dative] |
|     |          | theme               | beneficiary            | thematic roles       |
| (2) | She gave | <u>her daughter</u> | <u>a book</u>          | [DOC]                |
|     |          | beneficiary         | theme                  | thematic roles       |

### 2.2 Case Theory

Satisfying adjacency and government conditions (Chomsky, 1995), the verbal head in *to*-datives, as displayed in (3), assigns Structural Accusative Case to the theme “*a book*”, in the same way as the preposition *to* assigns Dative Case to its adjacent NP “*her daughter*”. However, DOCs raise an issue regarding Case Theory. As illustrated in (4), the verbal head can only assign Structural Accusative Case to its beneficiary role “*her daughter*”. Nevertheless, in order for the theme “*a book*” to satisfy the Case Filter, it is assigned Inherent (Accusative) Case, which does not require adjacency conditions.

- |     |          |                     |                        |                      |
|-----|----------|---------------------|------------------------|----------------------|
| (3) | She gave | <u>a book</u>       | <u>to her daughter</u> | [ <i>to</i> -dative] |
|     |          | Accusative          | Dative                 | syntactic cases      |
| (4) | She gave | <u>her daughter</u> | <u>a book</u>          | [DOC]                |
|     |          | Accusative          | Accusative             | syntactic cases      |
|     |          | <i>Structural</i>   | <i>Inherent</i>        |                      |

### 2.4 Derivation of ditransitive constructions in acquisition data

Snyder and Stromswold (1997) confirmed that DOCs are acquired earlier than *to*-datives. They claimed that what delays the acquisition of the latter constructions is the realization of the lexical item “*to*”; thus, children might start off producing *to*-datives with the incorrect preposition or prepositionless.

As far as the thematic and argument distribution mapping is concerned, Bowerman (1990) hypothesized that canonical *to*-datives are expected to be acquired earlier because children will have to associate a beneficiary role

with an Od argument position. Alternatively, the non-canonical argument distribution of DOCs will delay their acquisition as theme theta roles do not occupy the Od argument slot. However, Bowerman confirmed that *to*-datives and DOCs are favored indifferently.

### 3. Hypotheses

Taking these previous accounts, the following possibilities could occur in acquisition data when focusing on the order of acquisition of these structures:

- 1- Considering Baker's (1988) UTAH, it is expected that DOCs and *to*-datives have a concurrent acquisition since both structures share common theta-roles.
- 2- Concerning Case Theory, DOCs are derived from *to*-datives, as the case that the Od has is inherited from the Od in *to*-datives. Consequently, DOCs, as derived structures, are expected to be acquired later.
- 3- However, previous works on the monolingual acquisition show that DOCs appear earlier than *to*-datives (Snyder and Stromswold, 1997), which suggests that the syntactic complexity of DOCs may not be so for children.
- 4- If input is taken into account, the order of acquisition could correlate with the frequency with which a child is exposed to DOCs and *to*-datives.

### 4. Methodology

#### 4.1 Data selection

This study has been conducted by focusing on three simultaneous bilingual English/Spanish children, taken from the CHILDES database (MacWhinney, 2000). We have also considered child-directed speech to analyze the adult input effect.

The corpora that have been selected include the FerFuLice corpus (Licerias et al., 2008), corresponding to two identical twins (Simon and Leo), whose ages range between 1;0-6;5 and the Deuchar corpus (Deuchar and Quay, 2000) which includes data from Manuela, from the age of 1;3-3;3.

The search for ditransitive constructions has been carried out by resorting to KWAL, a CLAN program available through the CHILDES database. We have selected those constructions where the verb "*give*" subcategorizes for the following patterns: V+NP+NP and V+NP+*to*-NP. The same process has been repeated for both children and adults.

#### 4.2 Data classification

Data have been classified according to the type of participant, age range, mean length of word utterance (MLUw) and the object form. We have also taken into account those structures which display canonical DOCs and *to*-dative patterns, as in (5a) and (5b), respectively; we also considered those constructions which preserve canonical *to*-dative templates but they reverse their argument structure (5c) or those instances where the Od is omitted (5d).

- (5) a. Give me the ball (DOC, Leo 6;02)  
*V+Oi+Od*
- b. Then give it to me (*to*-dative, Simon 3;06)  
*V+Od+to-Oi*
- c. I give to L apple juice (*to*-dative, Simon 3;10)  
*V+to-Oi*
- d. He gives to me (*to*-dative, Simon 3;10)  
*V+ to-Oi*

Based on Snyder and Stromswold's (1997) criteria, syntactically ambiguous structures have been classified according to four patterns: (a) Od+Oi (*to* omission), as illustrated in (6), (b) Od null+Oi (*to* omission), as in (7), (c) Oi (*to* omission)+Od+*to*-Oi, illustrated in (8), and (d) Oi null+Od, as in (9).

- (6) I need to have it given me (Leo 4;10, FerFuLice corpus)  
 (7) Give me (Leo 3;09, FerFuLice corpus)  
 (8) Why don't you give me that clock to mommy, ok? (Melanie, FerFuLice corpus)  
 (9) I want to give two dollars (Leo 5;06, FerFuLice corpus)

In our classification procedure, idioms and collocations have been discarded. Likewise, interruptions in speech as well as those structures where the Oi is preceded by the preposition *for* have not been analyzed.

## 5. Analysis of results

The findings obtained for the age and order of acquisition of ditransitive constructions are presented according to three variables: (a) age-matched language development, (b) MLUw-matched language development and, (c) the effects of input.

In order to establish the age of acquisition of ditransitive constructions, we have taken into account the first clear productions.

Table 1. Age of acquisition of ditransitive constructions

|         | <i>To</i> -dative |                      |                              | DOC       | Syntactically ambiguous          |   |   |               |
|---------|-------------------|----------------------|------------------------------|-----------|----------------------------------|---|---|---------------|
|         | Canonical         | <i>To</i> -<br>Oi+Od | Od<br>null+<br><i>to</i> -Oi | Canonical | Od+Oi ( <i>to</i> -<br>omission) | Od<br>null+Oi<br>( <i>to</i> -<br>omission) | Oi ( <i>To</i> -<br>omission)+Od+ <i>to</i> -<br>Oi | Oi<br>null+Od |
| Manuela | 1;3               | 0                    | 0                            | 0         | 0                                | 0   | 0   | 0             |
| Simon   | 3;6               | 3;10                 | 3;10                         | 2;03      | 0                                | 0   | 0   | 0             |
| Leo     | 3;08              | 0                    | 0                            | 2;05      | 4;10                             | 3;09  | 0   | 0             |

As table 1 illustrates, Manuela only produced canonical *to*-datives at 1;3, where, as example (10) shows, the Od was realized as pronominal as opposed to the Oi (full DP).

- (10) Mum, give it to daddy (Manuela 1;3, Deuchar corpus)

Regarding the twins, Simon started uttering canonical DOCs at 2;03 (see example (11)) where the Od has the syntactic form of a DP and the Oi depicts a pronominal form. Two months later, Leo uttered his first ditransitive at 2;05, whose syntactic pattern, similar to Simon, has the form of a full DP in its Od and a pronominal form in its Oi (see example (12)). In fact, Simon started producing canonical *to*-datives at 3;06, unlike Leo who started two months later (at 3;08), as exemplified in (13a) and (13b). We cannot establish this comparison in Manuela as there has not been any evidence found of DOCs in her utterances.

- (11) Give me tv (Simon 2;03, FerFuLice corpus)  
 (12) Give me farmer (Leo 2;05, FerFuLice corpus)  
 (13) a. Then give it to me because it is for sharing, ok? (Simon, 3;06)  
 b. And if you do not give all of those pieces to me I am going to turn into a big monster and I kill you (Leo 3;08)

Thus, Manuela and the twins differ in the types of acquired ditransitives. Only the twins, as expected, acquired the same structures relatively at the same age.

Moreover, Snyder and Stromswold (1997) codified those patterns where the Od precedes the Oi (*to*-omission) as canonical *to*-datives. Therefore, these structures are expected to be acquired later than DOCs as the preposition “*to*” delays their acquisition. Hence, in order to disambiguate the remaining syntactic ambiguous patterns, we have followed Snyder and Stromswold’s argument where word order is crucial in the classification of ditransitive constructions. We have drawn the following conclusions:

- Od null + Oi (*to*-omission) would correspond to a *to*-dative; hence, it is expected to be acquired later than DOCs. This fact confirms our results in Leo, who starts producing this word order at 3;09 later than his first DOC at 2;05.
- There has not been any evidence found for the pattern Oi (with *to*-omission) + Od + *to*-Oi. Only one instance has been displayed in the adult input (e.g. “Why don’t you give me that clock to mommy, ok?” (Melanie, FerFuLice corpus)).
- Oi null + Od pattern would be considered as a DOC. Hence, our results confirm an early acquisition in Simon at 2;07 as opposed to Leo who, unexpectedly, has concurrently acquired it with *to*-datives at 3;08. We cannot draw any conclusions in Manuela because she has only uttered canonical *to*-datives.

### 5.1 Age-matched language development

Given the classification of *to*-dative constructions (see section 4.2), we have conducted an age-matched study (1;3-3;3) for each of their subdivisions. As illustrated in figure 1, Simon has significantly produced canonical *to*-datives (16 utterances) unlike Manuela and Leo who showed the same number of *to*-dative utterances in this age-range (2 utterances). Thus, we can conclude that Simon is more linguistically developed in the production of canonical *to*-datives, compared to the other participants. On the other hand, there has not been any evidence found in Manuela and Leo, regarding the pattern *to*-Oi + Od, unlike Simon who has presented one instance in his output, exemplified in (14).

(14) I give to L apple juice (Simon 3;10)

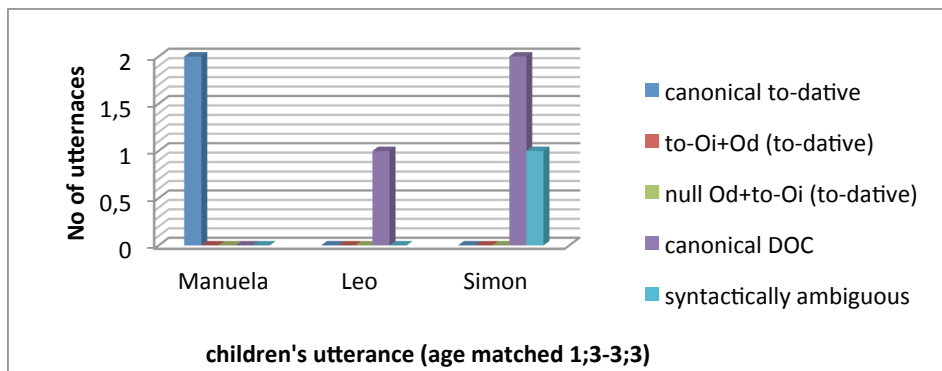


Figure 1. Age-matched acquisition of ditransitive constructions (1;3-3;3)

Regarding the utterance of canonical DOCs, both Simon and Leo have significantly produced these patterns between the age range of 1;3-3;3. Thus, unlike Manuela, the twins have displayed an acquisitional development in the performance of these utterances.

Given the obtained results, we can state that canonical *to*-datives are the most frequent structures which are produced within the age-matched 1;3-3;3 range in the three children, followed by canonical DOCs. As for the latter,

the fact that Manuela did not produce any DOC will be reflected in the lack of adult input (see section 5.2). It should also be highlighted that in both constructions the Od has been realized as a full DP whereas the tendencies for the Oi have been inclined to pronominal forms.

5.2 MLUw-matched language development

The participants’ mean length of word utterance (MLUw) has been analyzed to determine their linguistic development. Thus, the results in Manuela, Simon and Leo have been computed with MLU of 1 and 2 words.

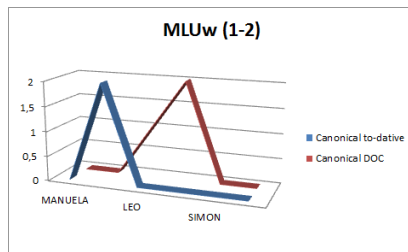


Figure 2. MLUw (1 and 2) in ditransitive constructions

As illustrated in figure 2, there has only been evidence found of canonical *to*-datives for the MLU of 2 words. Conversely, Leo has uttered three cases of canonical DOCs for the MLUw of 1, which suggests that Leo is more linguistically developed than Manuela.

Overall, in this first stage, there is no clear linguistic development in the production of ditransitives as the three participants have not been prolific in their utterances, apart from Manuela who produced 2 instances of canonical *to*-datives with an MLUw of 2.

In the second period (MLUw 3-9), we have included Leo and Simon because Manuela’s MLUw ranges until 2.10.

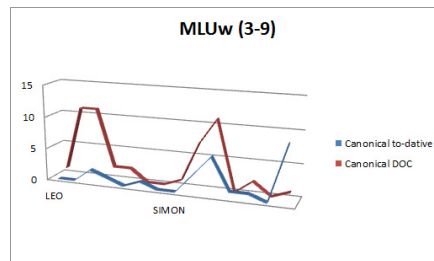


Figure 3. MLUw (3-9) in ditransitive constructions

As figure 3 shows, Leo’s MLUw rises in parallel to the production of canonical DOCs. However, after reaching an MLUw of 5, Leo’s DOCs decrease in number of cases as opposed to the increase of his MLUw. This developmental mismatch along with the frequency of the uttered ditransitive stems from the adult input, as will be seen in section 5.2. It is in this second MLUw period where Simon’s linguistic development is more evidently shown in the production of both types of ditransitives. Conversely, Leo has not revealed a linguistic maturity in the acquisition of these latter constructions. Similarly, we cannot offer concluding facts in Manuela because her MLUw range is lower than the twins’.

The following table offers a summary of the child language development taking into account three variables: (a) age of acquisition, (b) age-matched linguistic development, and (C) MLUw-matched utterances.

Table 2. Language development variables

|         | Age of acquisition (1 <sup>st</sup> production) | Age-matched (1;3-3;3)       | MLUw matched (1 and 2)                | MLUw matched (3 to 9)               |
|---------|---|-----------------------------|---------------------------------------|-------------------------------------|
| Manuela | Canonical <i>to</i> -dative                     | Canonical <i>to</i> -dative | Canonical <i>to</i> -dative           | No evidence found                   |
| Simon   | Canonical DOC                                   | Canonical <i>to</i> -dative | No evidence found                     | Canonical DOC                       |
| Leo     | Canonical DOC                                   | Canonical <i>to</i> -dative | Canonical <i>to</i> -dative (null Od) | Canonical DOC and <i>to</i> -dative |

As depicted in table 2, the age of acquisition differs in the three participants. More specifically, Manuela starts producing *to*-datives as opposed to the twins who begin to acquire canonical *to*-datives. Concerning age-matched variables (1;3-3;3), the three children coincide in the production of canonical *to*-datives. Concerning MLUw-matched (1 and 2) analyses, the twins equally develop *to*-datives. There has not been any evidence found in Leo. Furthermore, MLUw-matched (3-9) analyses have shown a parallelism in the production of canonical DOCs in the twins. However, only Simon has illustrated a concurrent linguistic development in both types of canonical ditransitives.

5.3 The effects of input

Adult input is another factor that affects the order of acquisition. Consequently, if we are on the right track, we expect that the frequency of child-directed speech utterances is parallel to the children’s output.

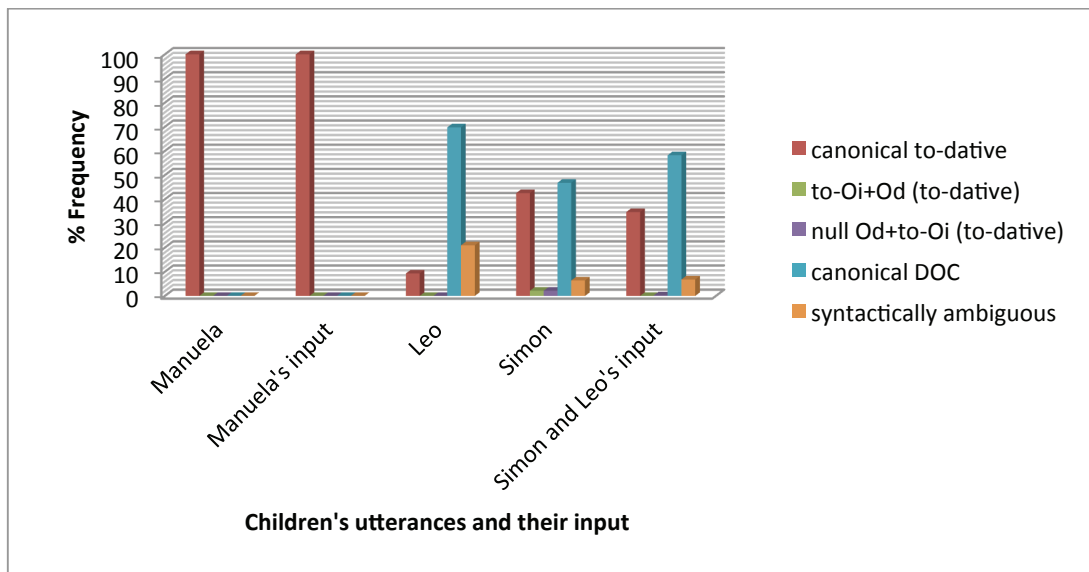


Figure 4. Children’s input of ditransitive constructions

As depicted in figure 4, Manuela’s output of canonical *to*-datives goes hand in hand with her input (100%). These results play a crucial role in Manuela’s acquisition of this type of ditransitives. Likewise, Leo’s production of canonical DOCs correlates with his high input (58,22% input as opposed to 69,77% output) unlike his low output of canonical *to*-datives (9,3%) which cannot be explained with his high input (34,72%). What is more striking in Leo’s utterances is the low input of the so-called syntactically ambiguous constructions (6,78%) against his high output (20,95%), especially when the Oi is not realized. Perhaps this fact might be explained by the adult’s lack of negative

evidence which leads the child to produce syntactically ambiguous ditransitives. On the other hand, Simon's input of canonical *to*-datives (34,72%) has shown a correlation with his output (42,55%), as well as in the production of DOCs (46,81%). In turn, the low adult input in non-canonical *to*-dative constructions (6,78%) also explains the child's (6,38%).

## 6. Conclusions

In this article, we have analyzed how the syntactic complexity of ditransitives is accounted for in bilingual acquisition. According to our results, UTAH (Baker, 1988) cannot confirm the concurrent acquisition of ditransitives in the three participants, in the same way as the twins' later acquisition of DOCs does not correlate with Case Theory (Chomsky, 1995). However, the input they receive explains their syntactic complexity.

Broader corpora are required to draw more standing conclusions. We also leave this study open to examine bilingual children's acquisition of Spanish ditransitive structures in relation to their L1 English ditransitive counterpart.

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